United States Court of Appeals

for the Second Circuit

APPENDIX

ORIGINAL

74-1823

United States Court of Appeals

FOR THE SECOND CIRCUIT

VERMONT FOOD INDUSTRIES, INC.,

Plaintiff-Appellee,

against

RALSTON PURINA COMPANY,

Defendant-Appellant.

ON APPEAL FROM THE UNITED STATES DISTRICT COURT,
FOR THE DISTRICT OF VERMONT

JOINT APPENDIX

OLWINE, CONNELLY, CHASE, O'DONNELL
& WEYHER
Attorneys for Defendant-Appellant
299 Park Avenue
New York, New York 10017

RICHARD E. DAVIS ASSOCIATES, INC.
Attorneys for Plaintiff-Appellee
P.O. Box 666
Barre, Vermont 05641

DEC 20 1974

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INDEX

Page

Docket Entries..... A1

Special Verdict..... A5

Judgment on Jury Verdict..... A6

Plaintiff's Answers to Defendant's Additional Interrogatories, November 6, 1973, Para. 3(e)..... A7

Defendant's Answers to Plaintiff's Additional Interrogatories, Paras. 1 and 2, including Information Supplied by Letter of July 25, 1973, Referred to Therein..... A8

Excerpts from Testimony:

Defendant's Motion for Directed Verdict..... A420

Denial of Defendant's Motion for Directed Verdict..... A421

Defendant's Motion to Strike Testimony..... A421

Denial of Defendant's Motion to Strike Testimony..... A422

Court's Charge..... A426

PLAINTIFF'S WITNESSES:

EARL E. MORILL

Direct..... A17

Cross..... A36

ROGER WALTER MURRAY

Direct..... A40

Cross..... A46

Recross..... A47

Index

Page

PLAINTIFF'S WITNESSES (Continued):

EVERETT SANFORD BRYANT

Direct..... A51

Cross..... A72

DEPOSITION OF DR. HAROLD C. GIBBS

Direct..... A80

Cross..... A96

JEANNINE LERICHE

Direct..... A101

(Recalled)
Direct..... A235

Cross..... A248

(Recalled)
Cross..... A361

LEOPOLD LERICHE

Direct..... A113

Cross..... A132

Redirect..... A137

Recross..... A143

Re-redirect..... A149

(Recalled)
Cross..... A316

(Rebuttal)
Direct..... A404

Cross..... A414

Index

Page

PLAINTIFF'S WITNESSES (Continued):

DR. LEO F. ELDRIDGE

Defendant's Examination..... A150

DAVID CLARENCE SNETSINGER

Plaintiff's Examination..... A154

Defendant's Examination..... A174

EDMUND HOFFMAN

Direct..... A177

Cross..... A210

Redirect..... A224

Recross..... A226

Re-redirect..... A233

Re-recross..... A234

LEONARD MERCIA

Direct..... A259

(Resumed)
Direct..... A292

Cross..... A295

Redirect..... A314

HAROLD MC LEOD

Cross..... A359

Index

Page

DEFENDANT'S WITNESSES:

MALDEN CHARLES NESHEIM

Direct..... A262

Cross..... A272

Redirect..... A291

ARTHUR CHARLES GAUTHIER

Direct..... A317

Cross..... A322

DAVID C. SNETSINGER

Direct..... A323

Cross..... A350

OLIVER WENDELL LIBBY

Direct..... A366

Redirect..... A368

Recross..... A369

ARTHUR WILDER MARSH

Direct..... A370

ROGER WALTER MURRAY

Direct..... A391

Cross..... A393

Redirect..... A394

WILLIAM W. RAGLAND

Direct..... A397

JAMES ALBERT BUSWELL

Direct..... A398

DOCKET ENTRIES

COUNTERCLAIM Filed 11-17-72

CIVIL DOCKET

UNITED STATES DISTRICT COURT

Civ. 6755

Jury demand date: Filed: 10-25-72
Date: 11-17-72

D. C. Form No. 106 Rev.

TITLE OF CASE	ATTORNEYS
VERMONT FOOD INDUSTRIES, INCORPORATED vs. RALSTON PURINA COMPANY	For plaintiff: Richard E. Davis Associates, Barre, Vermont For defendant: Matt L. Divoll, Divoll & Buckley Bellows Falls, VT 05101 John M. Schobel, Jr., Esq. 835 South 8th St. St. Louis, Missouri 63108 314 982-2168

STATISTICAL RECORD	COSTS	DATE 1972	NAME OR RECEIPT NO.	REC.	DI
J.S. 5 mailed NOV 6 1972	Clerk	10-25	#20270	15 00	
J.S. 6 mailed FEB 5 1974	Marshal JUN 17 1974				
Basis of Action: Contract	Docket fee				
	Witness fees				
Action arose at: 2	Depositions				

CLERK'S COURT OF APPEALS

A 2

Docket Entries

	PROCEEDINGS	Date Order Judgment No.
1972		
Oct. 25	Filed Complaint.	1.
" "	Issued Summons and delivered same to Marshal for service.	
" 31	Filed Summons returned served.	2.
Nov. 15	" Affidavit of Plaintiff.	3.
" 17	Filed Appearance of Divoll & Buckley, Esqs. for Defendant; Defendant's Answer; Counterclaim and Demand for Jury Trial.	4.
1973		
Apr. 11	Filed Notice of Pretrial Conference.	5.
" 26	" Pltf's Interrogatories to Deft.	6.
May 4	Filed Pltf's Pre-trial Conference Order.	7.
" "	" Pltf's Motion to Amend.	8.
" 11	Filed Plaintiff's Motion to Produce.	9.
" "	Filed Plaintiff's Additional Interrogatories.	10.
May 14	Filed defendant's pre trial conference order.	11.
" "	In Chambers before Judge Coffrin; David L. Cleary, Esq. for Plaintiff; Matt L. Divoll, Esq. for Defendant.	
" "	Court states he represented The Howard Bank in the original financing, but counsel advises Court that there is no conflict in this matter.	
" "	Matt L. Divoll, Esq. states his individual appearance should be noted for defendant.	
" "	Hearing on plaintiff's motion to amend.	
" "	Ordered: Motion granted.	
" "	Pre trial conference.	
" "	Ordered: pre trial to be rescheduled during last week of July, 1973; all discovery to be completed at same time and counsel should prepare a joint pre trial conference order.	
May 25	Filed Notice of Pre-Trial Conference sch. 7-6-73.	12.
1973		
July 6	In Chambers before Judge Coffrin. Pretrial Conference held.	
" "	Mr. Divoll moves for a special assignment in this cause.	
" "	Ordered: Motion granted. (sometime during Oct. or Nov.)	
" "	Ordered: that all discovery be completed by August 30, 1973; further pretrial to be scheduled in September 1973.	
" "	Filed proposed Pre-Trial Conference Order.	13.
" 31	Filed Notice of Pretrial Conference sch. 9-14-73 at 9:30 A.M.	14.
Aug. 22	" Deft's. Interrogatories to Pltf.	15.
" 28	" Defr's. Additional Interrogatories to Pltf.	16.
Sept. 13	Filed defendant's answers to plaintiff's additional interrogatories.	17.
" "	Filed Defendant's answers to plaintiff's interrogatories.	18.
" 14	Filed amendment to defendant's answers to plaintiff's interrogatories.	19.
" 14	In Chambers before Judge Coffrin, it is	
" "	Ordered: that Pretrial Conference be continued to Monday, September 17, 1973, at 11:30 AM at which time parties are expected to submit memorandum.	
" 14	Filed Defendant's brief of law and facts.	20.
Sept. 17	In Chambers, continued pretrial conference.	
" "	Filed Pre-Trial Conference Order.	21.
" "	" Memorandum of fact and law.	22.
" "	Ordered: that discovery be completed and case be scheduled for trial as No. 1 case week of November 26, 1973.	
" "	With respect to strict liability, plaintiff has until November 12 to file brief; defendant has until November 19 to file reply brief.	

Docket Entries

civ. 6753

Vt. Food Industries, Inc. vs. Ralston Purina Co.

1973		Docket No.
Nov. 7	Filed Plff's Request for Production of Documents.	23
" "	" Deposition of Dr. Harold C. Gibbs.	24
" 8	Filed Plaintiff's Answers to Additional Interrogatories.	25
Dec. 17	Filed deposition of witness, David Snetsinger.	26.
" "	" " " " Robert Dahlgren.	27.
" 18	" " " " Dr. Roger Murray.	28.
Jan. 8	Filed Deposition of Wendell Rivers.	29.
" "	" " " " Earl Morrill.	30.
" "	" " " " Leonard Mercia.	31.
" "	" " " " Bernard Morey.	32.
" "	" " " " Edmund Hoffman.	33.
" "	" " " " Harland Meddars.	34.
" "	" " " " Arthur Gauthier.	35.
" "	" " " " Oliver Libby.	36.
" "	" " " " Douglas Hastings.	37.
" "	" " " " Harold McLeod.	38.
" "	" " " " Ronald Genrick.	39.
" "	" " " " Dr. Malden C. Nesheim.	40.
" "	" " " " Gilford Spear.	41.
" "	" " " " Jeannine LeRiche.	42.
" 9	" " " " Richard W. Eastman.	43.
" "	" " " " Leo F. Eldridge D.V.M.	44.
" "	" " " " Leopold Leriche.	45.
Jan. 8	Trial by jury begun before Judge Coffrin. Richard Davis, Esq. and David Cleary, Esq. for Plaintiff; Matt Divoll, Esq. and John M. Schobel, Jr., Esq. for Defendant.	
" "	A jury was impaneled by the Clerk.	
" "	Ordered that two alternates be impaneled by the Clerk.	
" "	Opening statements were made to the jury by Mr. Cleary, followed by Mr. Divoll.	
" "	The following witnesses, sworn by Clerk, were examined for Plaintiff: Earl E. Morrill, Roger W. Murray and Everett S. Bryant.	
" 9	Trial resumed.	
" "	Everett S. Bryant was recalled and further examined for Plaintiff.	
" "	The deposition of Dr. Harold C. Gibbs was read to the jury.	
" "	Jeannine Leriche, sworn by Clerk, was examined for Plaintiff.	
" 10	Trial resumed.	
" "	Leopold Leriche, sworn by Clerk, was examined for Plaintiff.	
" "	Leo F. Eldridge, sworn by Clerk, was cross-examined for Plaintiff.	
" 11	Trial resumed.	
" "	Leo F. Eldridge was recalled and further cross-examined for Plaintiff.	
" "	David Snetsinger, sworn by Clerk, was cross-examined for Plaintiff.	
" 14	Trial resumed.	
" "	Edmund Hoffman, sworn by Clerk, was examined for Plaintiff.	
" "	Filed Defendant's request to charge.	46.
" "	" Plaintiff's requests to charge.	47.
" 15	Trial resumed.	
" "	Jeannine Leriche was recalled and further examined for Plaintiff.	
" "	Leonard Mercia, sworn by Clerk, was examined for Plaintiff.	
" "	Out of time with leave of Court, Malden Nesheim, sworn by Clerk, was examined for Defendant.	
" 16	Trial resumed.	
" "	Leonard Mercia was recalled and further cross-examined for	

Docket Entries

Civ. No. 6753 Vermont Food Industries, Incorporated
vs.
Ralston Purina Company

DATE 1974	PROCEEDINGS	Date Ord. Judgment
	liable to the plaintiff, Vermont Food Industries, Inc., for breach of its implied warranty of merchantability? YES 2. Is the defendant, Ralston Purina Company, liable to the plaintiff, Vermont Food Industries, Inc., for breach of an implied warranty of fitness for a particular purpose? YES 3. What damages did plaintiff sustain as a result of defendant's breach? $ 298,870.00 4. From which there is deducted the amount due the defendant under its counter-claim agreed by the parties to be $ 136,750.84 making the plaintiff's net damages $ 16.,119.16 5. To which there is added simple interest as agreed by the parties at the rate of 7½ per cent from October 25, 1972, to the date hereof in the amount of $ 15,190.15 6. Making a total judgment for the plaintiff in the amount of $ 177,309.31. Copy mailed to attorneys.	
Jan. 24		
Feb. 2	Filed Deft.'s Motion to set aside the verdict and the judgment thereon, and to grant judgment for the Deft., notwithstanding, or in the alternative to grant a new trial.	50.
" "	" Memorandum in support of above motion.	51.
" "	" Deposition of Louis Van Der Heide, D.V.M.	52.
" "	" Deposition of Everett Bryant, D.V.M.	53.
" 20	In Chambers, hearing on defendant's motion to set aside the verdict and the judgment thereon, and to grant judgment for the defendant notwithstanding, or in the alternative to grant a new trial. David Cleary, Esq. for Plaintiff; Matt Divoll, Esq. and John Schobel, Jr., Esq. for Defendant. Statements made to Court by Mr. Divoll in support of motion, followed by Mr. Cleary in opposition thereto.	54.
" "	Ordered: Motions overruled.	
"	Filed Memorandum in opposition to defendant's motions for judgment N.O.V. and in opposition to defendant's motion for new trial	
Mar. 20	" Deft's. Notice of Appeal. Mailed copy to Richard E. Davis Assoc., Inc., Matt L. Divoll, Esq., John M. Schobel, Jr., Esq.	55.
" 28	" Court Reporter, Judge Coffrin & Clerk Pusaro.	56.
Apr. 17	" Notice of Appearance of Olwine, Connelly, Chase, O'Donnell & Weyher, Esqs. as additional counsel for Deft.	57.
" 18	" Notice of Motion to Expend time for transmitting record	58.
	" Order extending time for filing and docketing record on appeal. Mailed copy to attorneys.	59.
June 10	" Transcript of Jury Trial, Books 1 thru 3.	60
" 13	Mailed Record on Appeal to Clerk, U. S. Court of Appeals for the Second Circuit, N. Y., New York. Attorneys notified.	

A 5

SPECIAL VERDICT

UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF VERMONT

Vermont Food Industries, Inc.	:	
	:	Civil Actinn
v.	:	
	:	File No. 6753
Ralston Purina Company	:	

SPECIAL VERDICT

1. Is the defendant, Ralston Purina Company, liable to the plaintiff, Vermont Food Industries, Inc., for breach of its implied warranty of merchantability? (yes or no) Yes

2. Is the defendant, Ralston Purina Company, liable to the plaintiff, Vermont Food Industries, Inc., for breach of an implied warranty of fitness for a particular purpose? (yes or no) Yes

   (If your answer to both questions 1 and 2 is "no", your verdict is for the defendant and you need not proceed to question 3.)

3. What damages did plaintiff sustain as a result of defendant's breach? $278,870

   (In computing the damages under 3 above do not take into account the amount of defendant's counter-claim.)

Miss Dorothy Dowling
Foreman

Filed January 24, 1974
Germaine R. Atherton
Deputy Clerk

A 6

JUDGMENT ON JURY VERDICT

JUDGMENT ON JURY VERDICT — CIV 39 (9-63)

United States District Court

FOR THE

DISTRICT OF VERMONT

CIVIL ACTION FILE NO. 6753

VERMONT FOOD INDUSTRIES, INCORPORATED

vs.

RALSTON PURINA COMPANY

JUDGMENT

This action came on for trial before the Court and a jury, Honorable Albert W. Coffrin, United States District Judge, presiding, and the issues having been duly tried and the jury having duly rendered its special verdict,

It is Ordered and Adjudged as follows:

1.	Is the defendant, Ralston Purina Company, liable to the plaintiff, Vermont Food Industries, Inc., for breach of its implied warranty of merchantability?	YES
2.	Is the defendant, Ralston Purina Company, liable to the plaintiff, Vermont Food Industries, Inc., for breach of an implied warranty of fitness for a particular purpose?	YES
3.	What damages did plaintiff sustain as a result of defendant's breach?	$ 298,870.00
4.	From which there is deducted the amount due the defendant under its counter-claim agreed by the parties to be $ 136,750.84 making the plaintiff's net damages	$ 162,119.16
5.	To which there is added simple interest as agreed by the parties at the rate of 7½ per cent from October 25, 1972, to the date hereof in the amount of	$ 15,190.15
6.	Making a total judgment for the plaintiff in the amount of	$ 177,309.31

Dated at Burlington, in the District of Vermont, this 24th day of January, 19 74

EDWARD J. TRUDELL
Clerk of Court

BY: Louise P. Aldrich
Deputy Clerk

Filed January 24, 1974

Louise P. Aldrich
Deputy Clerk

A 7

PLAINTIFF'S ANSWERS TO DEFENDANT'S ADDITIONAL INTERROGATORIES, NOVEMBER 6, 1973, PARA. 3(e)

UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF VERMONT

VERMONT FOOD INDUSTRIES, INC. vs RALSTON PURINA COMPANY	CIVIL ACTION FILE NO. 6753

ANSWERS TO ADDITIONAL INTERROGATORIES

* * *

(3) Same as No. 2 above.

* * *

(e) 7 or 8 years. Chickens have been raised from the time they are a day old to the time they were housed in laying houses during this period of time. Various flocks of chickens at various ages have been purchased from time to time.

* * *

A 8

DEFENDANT'S ANSWERS TO PLAINTIFF'S ADDITIONAL INTERROGATORIES, PARAS. 1 AND 2, INCLUDING INFORMATION SUPPLIED BY LETTER OF JULY 25, 1973, REFERRED TO THEREIN

UNITED STATES DISTRICT COURT
FOR THE
DISTRICT OF VERMONT

VERMONT FOOD INDUSTRIES, INCORPORATED

vs CIVIL ACTION FILE NO. 6753

RALSTON PURINA COMPANY

DEFENDANT'S ANSWERS TO
PLAINTIFF'S ADDITIONAL INTERROGATORIES

1) Provide the names of any and all customers of Ralston Purina's St. Johnsbury plant, who have received chicken feed with a protein rating of 14, 14 or 18% during the period from January 1, 1970, up to and including the present time.

Information supplied on July 25th directly to attorney for the plaintiff under separate cover.

2) State the names of any customers that the St. Johnsbury plant provides with chicken feed, which customers have flocks larger than 5,000 birds.

Information supplied on July 25th directly to attorney for the plaintiff under separate cover.

* * *

A 9

Defendant's Answers to Plaintiff's Additional Interrogatories, Paras. 1 and 2, Including Information Supplied by Letter of July 25, 1973, Referred to Therein

72190-001
answ

July 25, 1973

Mr. Richard E. Davis
Associates, Inc.
P. O. Box 666
Barre, Vermont 05641

Re: Vermont Feed Industries
Civil Action File No. 6753

Dear Mr. Davis:

Mr. Matt Divoll requested today, 7/25/73, that I forward directly to you the answers to interrogatories numbered one and two under the above file number.

Attached are:

(1) A list of poultry customers who were serviced with chows from our St. Johnsbury, Vt. plant from January, 1970 to present.

(2) A list of those customers feeding 5000 birds or more.

Yours truly,

Jake Reisinger
Credit Manager

gtd

cc: Mr. Matt Divoll
95 Rockingham Street
Bellows Falls, Vermont 05101

A 10

Defendant's Answers to Plaintiff's Additional Interrogatories, Paras. 1 and 2, Including Information Supplied by Letter of July 25, 1973, Referred to Therein

Ralston Purina Company
St. Johnsbury Plant
Poultry Customers

January, 1970 - Present

Arbor Acres Farms, Inc., Glastonbury, Ct.

Roger Archambault, Belchertown, Mass.

Robert Ayers, Whitehall, N. Y.

Reginald Barkyoumb, Fairfax, Vt.

David Berte, Plainfield, Vt.

Marshall Bean, East Kingston, N. H.

John Brochu, Hardwick, Vt.

Morris Burr, Hampton, Ct.

Cole Poultry, East Hampton, Mass.

Wendell Covey, West Brattleboro, Vt.

Cyrus Dalia, Roxbury, Vt.

Cecil Dickenson, Vernon, Vt.

Dobens Poultry Farm, Nashua, N. H.

DesBarres Poultry Farm, New London, N. H.

DeKalb-Warren, North Brookfield, Mass.

Arthur Dziengelewski, Southwick, Mass.

Arthur & Vitella Edmiston, Londonderry, N. H.

William Fisher, Island Pond, Vt.

Fort Halifax Packing, Waterville, Maine

Ray Fowler, Rutland, Vt.

Clayton Gay, Cherryfield, Maine

G. D. Poultry, Inc., Middleboro, Mass.

Gerald Greaves, Jr., Walden, Vt.

George Greenfield, Feeding Hills, Mass.

Hoffman Poultry, Brookfield, Ct.

Hubbard Farms, Walpole, N. H.

Hubbard Farms, St. Johnsbury, Vt.

Hubbard Farms, Louden, N. H.

C. N. Hardy & Son, Essex, Mass.

Charles Henry, Henry's Poultry Farm, Cranston, R. I.

Harco Farms, South Easton, Mass.

Charles Keefe, Walpole, N. H.

Wilfred Lajoie, Brunswick, Maine

Haven Little, Rumney, N. H.

Leopold Leriche, Hardwick, Vt.

John Newcomb, Perry, Maine

Parente Poultry Farms, Inc., Mansfield, Mass.

Maxwell Pyenson, Otis, Mass.

Penobscot Poultry (Bayside Enterp.), Belfast, Maine

Leo Power, Grafton, N. H.

Rawson's Poultry Farm, Feeding Hills, Mass.

Spafas, Inc., Norwich, Ct.

Somerville Poultry Co., Inc., Cambridge, Mass.

Sun Valley Ranch, Inc., Warren, Mass.

Vernon Tourtellotte, Foster, R. I.

Vermont Food Industries, Inc., Hardwick, Vt.

Vermont Food Industries, Inc., Augusta, Maine

A 12

Defendant's Answers to Plaintiff's Additional Interrogatories, Paras. 1 and 2, Including Information Supplied by Letter of July 25, 1973, Referred to Therein

Ward Poultry Farms, Inc., Monroe, N. H.

Wallace Poultry Farms, Inc., Branford, Ct.

We Hope Poultry, Inc., Feeding Hills, Mass.

Kenneth Wirtes, Lanesboro, Mass.

Samuel Westcott, Williamstown, Mass.

Wilcox Poultry Farms, Whitman, Mass.

A 13

Defendant's Answers to Plaintiff's Additional Interrogatories, Paras. 1 and 2, Including Information Supplied by Letter of July 25, 1973, Referred to Therein

Ralston Purina Company
St. Johnsbury Plant

Customers with 5000 Birds or More

January, 1970 - Present

Arbor Acres Farms, Inc., Glastonbury, Ct.

Roger Archambault, Balchertown, Mass.

Reginald Barkycumb, Fairfax, Vt.

David Berte, Plainfield, Vt.

Marshall Bean, East Kingston, N. H.

John Brochu, Hardwick, Vt.

Morris Burr, Hampton, Ct.

Cole Poultry, East Hampton, Mass.

Wendell Covey, West Brattleboro, Vt.

Cyrus Dalia, Roxbury, Vt.

Dobens Poultry Farm, Nashua, N. H.

DesBarres Poultry Farm, New London, N. H.

DeKalb-Warren, North Brookfield, Mass.

Arthur Dziengalewski, Southwick, Mass.

William Fisher, Island Pond, Vt.

Fort Halifax Packing Co., Waterville, Maine

Clayton Gay, Cherryfield, Maine

G. D. Poultry Co., Inc., Middleboro, Mass.

George Greenfield, Feeding Hills, Mass.

Hoffman Poultry, Brookfield, Ct.

Hubbard Farms, Walpole, N. H.

Hubbard Farms, St. Johnsbury, Vt.

A 14

Defendant's Answers to Plaintiff's Additional Interrogatories, Paras. 1 and 2, Including Information Supplied by Letter of July 25, 1973, Referred to Therein

Hubbard Farms, Loudon, N. H.

C. N. Hardy & Sons, Essex, Mass.

Harco Farms, South Easton, Mass.

Charles Keefe, Walpole, N. H.

Wilfred Lajoie, Brunswick, Maine

Leopold Leriche, Hardwick, Vt.

John Newcomb, Perry, Maine

Parents Poultry Farms, Inc., Mansfield, Mass.

Maxwell Pyenson, Otis, Mass.

Penobscot Poultry, (Bayside Ent.), Belfast, Maine

Rawson's Poultry Farm, Feeding Hills, Mass.

Sun Valley Ranch, Inc., Warren, Mass.

Vernon J. Tourtellotte, Foster, R. I.

Vermont Food Industries, Inc., Hardwick, Vt.

Vermont Food Industries, Inc., Augusta, Maine

Ward Poultry Farm, Inc., Monroe, N. H.

Wallace Poultry Farm, Inc., Branford, Ct.

Kenneth Wirtes, Lanesboro, Mass.

We Hope Poultry, Inc., Feeding Hills, Mass.

Wilcox Poultry Farm, Whitman, Mass.

A 15

EXCERPTS FROM TESTIMONY

UNITED STATES DISTRICT COURT

FOR THE

DISTRICT OF VERMONT

VERMONT FOOD INDUSTRIES, INC.	)	
	)	Civil Action File
V	)	
	)	Number 6753
RALSTON PURINA COMPANY	)	

Before: HONORABLE ALBERT W. COFFRIN, U.S.D.J., and a Jury, Burlington, Vermont, January 8 - 24, 1974.

Appearances:

RICHARD E. DAVIS ASSOCIATES, INC., Barre, Vermont, by RICHARD E. DAVIS and DAVID L. CLEARY, ESQRS., of counsel, attorneys for the plaintiff.

NATT L. DIVOLL, JR., ESQ., Bellows Falls, Vermont, and JOHN SCHOBEL, JR., ESQ., St. Louis, Missouri, attorneys for the defendant.

Francis A. Cumming, Reporter
28 Waterman Street
Barre, Vermont 05641

* * *

of the year, or springtime of 1971. At this time, we have several other flocks just starting. The consistent thing throughout all the testimony, I think you will find from Mr. LeRiche and his wife, is that the sameness that they noted, the similar problem they found was that the eggs were smaller in size than they should have been, and that the production was drastically below what all the manuals, and all the experts say it should have been for the type of housing conditions, and good management that he had.

Our contention is there were no problems with management at this time, and we think the Ralston Purina Company must agree. That leaves us only several alternatives, if there is nothing wrong with the way the hens are being raised and taken care of when they are in the laying house to lay eggs. It is either air, or water, or feed. Certainly we feel we can rule out air and the water. That leaves us with only one item, Ladies and Gentlemen, that can cause birds to have the condition that we found them to have, and the condition that we found when we looked deeply enough into the problem when it became such a severe problem that we consulted experts in several states, and independent experts as well, university people at the University of Vermont, University of Maine, University of Connecticut; independent millers and grainers from Massachusetts, experts in their own field, when we weren't getting any satisfaction from the Ralston Purina

* * *

compared to the growing ration?

A. Yes.

Q As I understand it, the starter ration is from zero to six weeks?

A. Generally, six or seven weeks.

Q From six to twenty weeks, there is a growing ration?

A. Yes.

Q Following that time, the birds are supposed to start laying, is that correct?

A. They then may start at about twenty weeks to lay; twenty to twenty-one.

Q What is the laying cycle?

A. Generally, they lay twelve to thirteen months at first and recycle them and they lay another eight months.

Q Can you describe the term, "recycle"?

A. Yes. After birds have laid twelve or thirteen months, some times fourteen months, depending on the weight, the birds are recycled, or forced molted. This requires moving feed, water, lights for a specific length of time; removing.

Q What is the effect of that on the birds?

A. This reduces egg production to zero. It shakes a lot of feathers off the birds, and then they build these feathers back up. They grow back on them; they look like a new pullet, and they start back into production. It

* * *

about four months; maybe slightly longer.

Q And, to your knowledge, are there some charts, or curves, or something that is produced and generally used in the industry as a guide to the people who are in the egg producing business?

A. Every breeder that I know anything about--either brown or white eggs--have a production chart that they send out to show what the birds should do in production, and in livability.

MR. DAVIS. May I have just a moment, your Honor?

THE COURT. Surely.

Q (By Mr. Davis) Would you look at these charts that I am handing you, Numbers "2," "3," "4," "10," "12," "16," "18," and "30" for identification? (Handed to the witness)

A. Yes.

Q Now, have you looked at those various charts, or cards, that I have shown you?

A. Yes.

Q Could you tell us, in general, what they are?

A. They are production records graphed out by the week.

Q And, is that something that you are familiar with?

A. Yes, this is done.

Q We talked earlier, or did we, about production curves that are published by the breeder of a particular type of bird?

A. Yes.

Q And are these charts, to your knowledge, produced by the breeder?

A. Yes. This is an H & N Chart, I believe, put out by Hisdorf Nelson, one of the primary breeders in the country.

Q Without taking up your time with all these charts, let me show you Plaintiff's "18," and is that a chart you have seen before you came to court this morning?

A. Yes.

Q What is that a chart of, to your knowledge?

A. That is a chart of this complex "C" which would be the third building that he built, and this is a production graph of what they did for her. It would be about thirteen months of lay.

Q When you talk about "lay," we are talking about the birds, right?

A. Right.

Q Now, is there a heavy black area in this chart that looks like a highway?

A. Yes.

Q What is that?

A. This is what the flock, the range should be within these two lines. It should go up and peak here and gradually taper down within this area here. That would be a normal curve.

Q Normal rate of production?

A. Right, that is correct.

Q And, as you look at this chart, do you see some red ink there?

A. Yes, I do.

Q What is that, to your knowledge?

A. That is the actual production of this particular flock graphed out by the week.

Q How many birds were there in this flock?

A. Thirty-three thousand.

Q You mentioned complex "C" as being the third building that was built, is that correct?

A. That is correct. I believe that was the third building he built.

Q Before we get into that further, let me ask you how long have you been familiar with Mr. LeRiche's poultry operation?

A. I have been doing business with Mr. LeRiche for about six or seven years before he built the complex.

Q When we talk about the complex, what are we talking about? Could you describe it for us?

A. Yes, three buildings that he built in Hardwick. I think the first building went up in 1969, and he built the second and third buildings subsequently.

Q Those are brand new buildings?

A. Yes, correct.

Q How were they equipped?

A. The equipment is Big Dutchman Automatic Feeding Cages. The cages are 12 by 18, and automatic water. He has continuous flow of water. They have a ventilation, I believe, around 5 c.f.m. per bird. They are a very excellent facility.

Q Do you know of any others in the area more modern than those?

A. No, I do not.

Q How about the facilities that existed before the complex was built? Are you familiar with those?

A. At his place in Wolcott, you are referring to?

Q Yes.

A. Yes. He had a building he refers to as the "homosote building" which was converted two floors to cages, and the bottom floor was a floor operation. The Eldridge farm was a floor operation, and he has a smaller building which was also a floor operation.

Q What do you mean by "floor operation"?

A. The birds are not in cages, they are on the floors.

Q In the so-called homosote building, you say they were on two floors?

A. That is correct.

Q What type of feeding apparatus?

A. Same.

Q As what?

A. As he has in the complex--Big Dutchman Feeders, same water system, same c.f.m. per bird--cubic feet per minute. They have to have this much air to be properly ventilated.

Q Is that all?

A. Yes; thermostats.

Q There were thermostats in the homosote building exactly like the new complex?

A. For all practical purposes.

Q And, there was another floor where there was floor feeding?

A. Right.

Q You mentioned the Eldridge farm.

A. Yes, that is an entirely floor operation.

Q Now, in the homosote building, were there layers?

A. Yes, that is correct.

Q Before the complex was built, the new complex, were there layers there?

A. Yes, there was.

Q Did you ever sell any feed to Mr. LeRiche before the new complex was built?

A. Oh, yes. His complex went up in '69, which is five years ago. I would think I was selling him feed about two years--in that range--before he built his complex.

Q When you say that you were selling him feed, did you sell

him feed for starter chicks that were growing?

A. No, I only sold him laying feed.

Q That is all you sold?

A. Yes.

Q That was A. D. Pease?

A. A. D. Pease Grain Company, Burlington, Vermont.

Q Where is that feed mixed?

A. In Burlington, Vermont.

Q Who formulated the feed?

A. I did.

Q How did you go about that in terms of formulating?

A. You are now talking about a floor formulation, or cage, or what?

Q As I understand it, we are talking about birds in cages in the homosote building that were layers.

A. When cages came to this area, which was probably, oh, I would say, six years ago, maybe a little longer; prior to that, it was all floor birds, and we felt; that is, the company I work for, felt that cage layers require a higher level of protein. We feel they required a higher level of some of the micro-nutrients, and based on that belief, we formulated these feeds in this manner, and 18 per cent was the level that we use protein, and we increased the phosphorus level and some of the other micro-nutrients, because in a cage, a bird is unable to recycle anything

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A. I see Mr. LeRiche about once a week, unless I am on vacation or something extraordinary comes up.

Q Did you go into the buildings on occasion?

A. Oh, yes.

Q Including the new complex?

A. Oh, yes, I have been in there many times.

Q And, how about the Eldridge building and the homosote building, did you go into those buildings?

A. Yes.

Q Did you observe the manner of operation?

A. Yes.

Q And, housing of the birds?

A. Yes.

Q And, water and air?

A. Yes, many times.

Q How long have you been going into poultry farms of this nature?

A. You mean of the cage type, or any type?

Q Any type.

A. Twenty years.

Q And, you have observed the management and operation of these facilities over a period of twenty years?

A. Yes.

Q Could you tell us, from your observations, what is the ventilation situation at these various buildings?

A. Of Mr. LeRiche's?

Q Yes.

A. I found them to be very good; very adequate.

Q How about the water situation?

A. Very good.

Q And, the management in general, how would you describe that?

A. I would say Mr. LeRiche is a very good manager.

Q And, did there come a time when Mr. LeRiche said something to you relative to his problems of production?

A. Well, he mentioned it to me off-and-on, yes. He would mention it to me that he wasn't getting the number of eggs he thought he should. He mentioned it to me, periodically. But, there wasn't anything I could do about it. I wasn't feeding the birds or servicing the birds.

Q Let me ask you this. Did he complain about the production of the birds being fed on A. D. Pease grain?

A. Not to my knowledge. I am sure I am correct here that I have never fed a flock of his that has not performed well.

Q Well then, what was he complaining about?

A. He was complaining about the fact he wasn't getting the production he thought he should get in the other buildings.

Q These are the birds being fed on Purina?

A. That is correct.

Q To your knowledge, when was it, for the first time, Mr. LeRiche spoke to you relative to the matter of low production?

A. Well, I would say early 1971 he mentioned it.

Q And, was there more than one occasion he mentioned it to you?

A. He would mention it periodically he didn't think he was getting the eggs he thought he should get.

Q Did you do anything, at any time, with reference to his complaints of low production?

A. Well, the first--I would say the first time that he really called me was when I was at another account, another customer, and said he had a very serious problem. So I was going to be there the next morning, and so I arrived, and he complained about the fact he had a flock of birds that were doing very, very poorly. So I said that we had best go in and look at them. So we went and looked at them, and I opened up a couple birds, and I couldn't discern any gross pathology, but one thing very obvious was these birds were terribly obese. I have never seen birds at this age--they were about thirty-six or thirty-seven weeks of age--and they had a fantastic amount of fat in them, and I suggested to Mr. LeRiche we take some of the birds into the laboratory and submit them to Doctor Murray. So I think I took in a half dozen birds,

or so, that day, and Doctor Murray looked at them. He didn't discern any pathology, but he commented on the fact these birds were extremely obese. I think his comment was he had never seen birds at this age this fat, and I hadn't either in twenty years, and I have seen a lot of birds and seen a lot of birds opened.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibit "35" for identification is accession report.

Q (By Mr. Davis) Mr. LeRiche, did he call you on the phone?

A. Yes.

Q And, you were at somebody else's place of business?

A. Yes, I was at another customer.

Q What did he say to you?

A. He said he had a problem and wished I would come up immediately. I said, "I am going to be there tomorrow morning,..would that be soon enough," and he said, "Yes," and I was there the following morning.

Q And, you mentioned that you opened up a couple of birds?

A. Yes.

Q You mean, you sacrificed them?

A. We killed the birds and disected them; opened them up and looked at the internal organs, but I couldn't discern any gross pathology. I did notice, and it was self-evident, this terrible amount of fat that was accumulated and birds at this age, or really any age, this was very

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tory disease; tracheitis, nothing but an inflammation of the trachea and mucus accumulates. The air sacks are clouded with yellow extract; you have film on the liver; there would be some respiratory symptoms; you have synovitis, nothing but an inflammation of the synovial joints, a common problem with chickens; you have leukosis which up to the event of the Marek's Vaccine was the Number One killer we had to face. You have intestional problems; you have neuritis; you have coccidiosis which has been with us and probably always will be. There are a number of poultry diseases. There are more diseases than Carter has liver pills.

Q How did you get to know about these kind of things?

A. How did I?

Q Have you been trained in this kind of work?

A. Well, when I first took this job I went to a disease school at Wetmore Laboratories in Pennsylvaia. That was my first exposure to this end of the business, and since that time I have attended the health conference in New Hampshire which specializes in poultry diseases, and working with a laboratory at the University of Vermont, Doctor Bolton, and reading and studying, and on-the-field observation. I have accumulated a certain amount of knowledge regarding poultry diseases.

Q So you saw nothing in any of the birds that were taken to

the laboratory indicating the presence of any disease, is that correct?

A. No, I did not.

Q You saw only this excessive fat situation?

A. Very, very fatty, yes.

Q Have you ever seen birds as fat as that before?

A. Not to my knowledge, and I never saw birds at that age that fat. I can make that statement. Possibly, if you got into some heavy breeders at the tail end, they are a big heavy bird, but I have never seen birds at this age this fat, no.

Q Now, were there some sister birds to the flock that was in complex "B" that were also in the homosote building you were feeding?

A. Yes, that is correct.

Q That is, these birds in complex "B" and the ones that were in the homosote building were both baby chicks together and grown together?

A. That is correct.

Q And, there came a time they were housed?

A. That is correct.

Q And, part were housed in complex "B" and the rest put into the homosote building?

A. That is correct.

Q How many birds were put into the homosote building?

A. Between four thousand and forty-five hundred.

Q Between four thousand and forty-five hundred?

A. Yes.

Q And, the rest were all over in complex "B"?

A. That is right.

Q At complex "B", they were getting Purina feed?

A. That is correct.

Q And, in the homosote building they were getting Pease feed?

A. That is correct.

Q Did you make some comparison with respect to the matter of weight, or determine the condition of the birds in complex "B" with those in the homosote building?

A. Well, at the time these birds were housed, I believe they were housed at twenty weeks, approximately. Thereafter, I made a point, I would like to look at the birds when housed, and Mr. LeRiche and I went into the homosote building and examined the birds. We handled quite a few birds, looked at them very carefully, and I told him at the time, "Leopold, these birds are in excellent order and should do you a lot of good," and subsequent to that, they did. They did an excellent job for him.

Q Did you happen to look at the birds in complex "B" at that time?

A. Yes, I looked at those also.

Q Were these birds in excellent condition?

A. They had to be. They were the same flock. They were in very, very good order.

Q The four thousand or forty-five hundred birds in the homosote building and all the birds in complex "B" grew up together in one place?

A. Yes, that is right.

Q And then divided at the time they went into the laying cages?

A. That is right.

Q Now following the time you saw all this excess fat in 1972, did you look at some of the birds in the homosote building?

A. You said, prior to?

Q No, after, after you saw all this excess fat in the birds you took out of complex "B".

A. Did I take any birds in from the homosote?

Q Yes.

A. No, I did not.

Q Did you look at them?

A. I looked at them, their proximate livability. The way they looked indicated no problem at all, and I think if you will examine the production graphs you will see why.

Q What do you mean by that?

A. I mean they laid very well. The fact is that I think the figures show for a year's lay, somewhere around 250

eggs per bird housed, and that is a very fine job. You can't expect much more out of a bird than that. At least, I don't think so.

Q Showing you a chart which is Plaintiff's "20," I ask if you can identify that one for us? (Handed to the witness)

A. Yes, that is the homosote building, the flock under discussion. Now that was part of the flock grown together, and this group was housed in the homosote building and the balance housed in "B" complex.

Q Could you tell from that chart when those birds were housed, when the forty-three hundred some odd birds were housed?

A. They were housed in April.

Q Of what year?

A. 1972.

Q And, in your opinion, does the chart reflect a normal production for those birds?

A. I would say,yes, it falls very, very well.

Q I show you another chart, Plaintiff's "12". (Handed to the witness) Do you recognize that chart?

A. Yes. This is another part of the same flock we have been discussing that were housed in "B" complex.

Q All right. Are you saying then that the 4,320 birds shown on Plaintiff's "20," and the 25,760 birds shown on Plaintiff's "12" are all sisters grown at the same time, but divided as we have described by prior testimony?

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conditional solubles, maybe 1 per cent alfalfa and things of that nature; maybe 1-1/4.

Q What is the objective of this mixture of the ingredients?

A. You are shooting for certain specifications, and, of course, it depends on who is formulating, what they want to get. In the case of our cage layers, we are shooting for 18 per cent protein with certain levels of metabolism, certain levels of calcium, certain levels of phosphate, certain level of vitamins, trace minerals, and so forth.

Q Why is it that you are shooting for 18 per cent protein?

A. Well, from what we have observed in the field, what we have studied, what some of our primary breeders are recommending for their birds, we decided this would be the road to go down, and that is the road we have gone down, and it has done a very good job since we have been formulating the feed for six years now, or so.

Q You mentioned the breeders recommend certain protein levels, is that correct?

A. Yes, some of them do.

Q With reference to the Warren Sex-Sal birds, are you familiar with the breeder's recommendation?

A. Yes, the Warren Sex-Sal is probably the most popular brown egg bird in the area I cover, and it is a good layer. It converts well, it lives well, it produces a good egg, a good-sized egg, a good shell, a good interior quality,

and Jim Warren, who I know very well, it is his geneticist that developed the bird, and he believes and thinks in terms of 17 to 18 per cent protein.

Q Is that the recommendation?

A. That is the recommendation he would make.

Q What about the White Leghorn?

A. Well, you have got DeKalbs, you have got H & N, and many White Leghorns. A White Leghorn is a much smaller bird, eats less feed, and I think, I believe I am correct in this that the DeKalb has a very comprehensive recommendation as to the protein level and the amino acid level, and all the vitamin levels and minerals, and so forth. I believe that in their first phase of production with the DeKalb that they recommend either an 18 or 19 per cent protein. I don't want to be held to that, but I believe that is correct.

Q Now, were you aware of the fact that the protein level in the Purina feed which was being delivered to the new complex and to the other birds being fed on Purina, was of 15 per cent protein?

A. Yes, I was.

Q So at the same time you were furnishing an 18 per cent protein level feed, Purina was furnishing a 15 per cent?

A. That's correct.

Q Had you, prior to that time, prior to the time you delivered

the 18 per cent protein feed to Mr. LeRiche, had you recommended that he use the 18 per cent?

A. Say that again.

Q Had you recommended to Mr. LeRiche he use the 18 per cent?

A. Oh, yes. This has been our program.

Q I think you told us at some time that you carried out the functions of a service man?

A. That's correct.

Q What is a service man?

A. Well, a service man has only one reason for existence, and that is to maximize the profit of his customers in any way he can legally; that is, of course, he recommends feeding programs; he may recommend types of birds that he thinks will be more profitable for a producer to use; he keeps track of the flocks; if they have disease problems, to get them into the laboratory, or check them out on the farm themselves; open up birds and recommend medication in order to get the birds out of the problem as rapidly as he can, because time is of the essence. If a man has a disease problem, the quicker you can get diagosis and treatment going, the better chance of getting him out of the problem, and if you wait too long, it can cost a man a lot of money.

MR. DAVIS. That is all. Your witness, Mr. Divoll.

CROSS EXAMINATION

Q (By Mr. Divoll) Now, Mr. Morrill, I think you said you had been working for the Pease Grain Company for some twenty years?

A. Yes, that is correct, sir.

Q And, what was your occupation before that time?

A. I worked for the Kraft Food Company in Chicago.

Q What type of work?

A. I worked in the factory, and I had several duties in my occupation there. I ran their candy machines for them, I ran their mayonnaise machines, and I was a Parkay set-up for them.

Q Perhaps we can reach the conclusion I am trying to draw here by a simple question. Is your experience in the poultry industry only that which you have received from A. D. Pease Company?

A. That is correct.

Q Now, have you had any education along the lines of your occupation with the A. D. Pease Company?

A. You mean, formal education?

Q Yes.

A. No.

Q You did mention you had gone to a couple of seminars, or something like that. Do you remember what they were?

A. Well, I have been going to two nutritional conferences

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does affect their production?

A. Oh, no doubt; no doubt. If they didn't get feed, they wouldn't lay either; or air.

Q You were discussing production charts. I think you testified that these were put out by the breeders?

A. Yes, they are put out by the breeders.

Q Do the feed companies put them out?

A. My feed company doesn't put out any charts. The charts I am familiar with come from the people that produce the birds.

Q And, they are designed to show what production can be expected?

A. Right, under normal conditions.

Q From the birds?

A. Right.

Q Now, you say most growers keep these charts?

A. No, I wouldn't say they do. I would say, some do and some don't.

Q Now, how many flocks of chickens do you service in the area? Let's assume that you service.

A. That we service?

Q Right.

A. Well, let's see. We service, I would say, probably ten to twelve producers in the area that I cover, and these producers have more than one flock. They may have

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problem, that is correct. Yes, this is true.

Q And, that affects their production?

A. No question; no question.

Q And, when you speak of "mechanical," I assume you are talking about the water supply?

A. If the water supply goes off, if the feed supply goes off, if the air goes off. I mean, it is common knowledge that a bird can survive for three weeks without feed, and three days without water, but she can't live three minutes without air. No question about that.

Q Now you talked about the homosote building which is where the forty-three hundred birds that you serviced lived, and the complex which is where the birds that Purina was feeding lived, and I think you said that these buildings were similar?

A. For all practical purposes, right.

Q Now do you mean you examined and saw that all the mechanical things were exactly similar, or just their type of equipment was similar?

A. No. The equipment was, in both cases, Big Dutchman Feeders. They have the same size cage, 12 by 18; same type of water system, continuous flow; and they have the same number of lights. They have the same number of C. F. M. per bird. In other words, for practical purposes I would say the environmental factors are almost identical,

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amino acids.

Q A protein of 18 per cent almost automatically gives you the amino acid requirement, doesn't it?

A. What is that?

Q A protein level of 18 per cent almost automatically gives you the requirement for amino acids?

A. Not necessarily. Some times you might have to add a little methionine.

Q But, generally?

A. Yes, true.

Q Do you consider it possible to give the amino acid requirements by the--correction, addition of the proper amino acids, but still keep the protein down?

A. Yes, theoretically.

Q Hasn't that been the theory in feed formulation ever since proteins became expensive?

A. Yes, very true.

Q And, this is the reason of the trend to low protein feeds?

A. In some cases some companies have taken that road; some haven't, and we are one of those that haven't.

Q You are one of the minorities, aren't you?

A. I am not sure of that either. I think most companies offer a range of protein feeds.

Q Did you investigate the lighting on the homosote flock and complex "B" flock?

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internal organs from then on.

Q You followed that procedure on this occasion?

A. Yes; I did one more thing. We also cut open the combs and the foot pads to see if we can see any excessive fluid in them. This is routine. We do this with all the birds; regardless of what the history is, we do this routine type of procedure.

Q Following that procedure then, Doctor, will you tell us whether or not you observed any unusual condition in these birds?

A. Well, the most obvious thing was that these birds were extremely fat. They had, as a matter of fact you could see this without even opening the birds. Their abdomens were distended, and you could actually see the fat; at least, the outline of the fat. As I say, they had this distended abdomen from the fat. Then we opened it up. Not only were they unusually fat, but even older birds get some fat on them. When you touch them, you usually have clean hands, but these birds were so fatty that when you attempted to touch them you got greasy fat all over your gloves. They were quite messy to handle, they were so fatty. In other words, not only did I see all this excessive fat, but there was varying degrees in fatty liver appearance of the livers. In other words, some would be more tan, some would be more yellow, and so forth.

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A. That means they are very sensitive and break apart easily.

Q Do you have some opinion as to why they were in that condition?

A. From the appearance of them, it would appear it was due to the fact they were too fatty. In other words, they were swollen. When they have fat in them, they are swollen and break apart easily. The cells are expanded, and they break easily.

Q Did you find anything else in significance, Doctor, on this occasion?

A. I don't know; I wouldn't say, "significant". There was one bird that had very mild inflammation of the intestines.

Q You say, that was not significant?

A. I didn't consider it to be significant, no. We see this in any flock. You see an occasional bird with this. I don't consider it significant, no.

Q Did you find any other evidence of disease in these birds, Doctor?

A. No; there is nothing else, no.

Q So in conclusion, Doctor, the only thing that you did find was the evidence of excessive fat condition in these birds?

A. Yes, very obese birds with varying degrees of fattiness of the liver.

Q And, based upon that work, Doctor, did you come to some conclusion with respect to what was wrong with these birds, if anything?

A. Well, in general, I came to the conclusion--just as a general term, we would say they were affected by obesity, and being more specific since they had these fatty livers, too, we call this, "fatty liver syndrome".

Q Could you define what you mean by that phrase, Doctor, "fatty liver syndrome"?

A. Well, it is--the word, "syndrome", means we see a certain condition where it shows certain characteristics. In the case of fatty liver syndrome, we see birds with excessive fat. They have varying degrees of fattiness of the liver, and maybe some other organs. They have a history, most of them being caged birds, and usually, they also have a history of lower than normal egg production. All these things make up what we call "fatty liver syndrome".

Q Did you make any recommendations at that time with respect to what should be done in regard to feeding of the flock in the future?

A. I recommended they be put on what we call "fatty liver syndrome diet," which is composed of Vitamin B-12, Choline, and Vitamin E, and I also recommended they feed 18 per cent protein.

Q Could you explain, Doctor, why you made those recommenda-

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A. All of them extremely fatty; they showed fatty livers. Some of the kidneys appeared to be a little bit yellow also, and the livers very friable, the same as the other group of birds. I didn't notice any other condition in these birds.

Q Now, at that time, on August 10th, did you make any recommendations to Mr. Gauthier with respect to these birds?

A. The same recommendation.

Q That they be put on 18 per cent protein?

A. I don't know if I told him directly or not.

Q What do you mean?

A. Well, in other words, when we make up the accession, before I write the recommendations down, in other words, I may consult with somebody, you see. So I may not have made that recommendation that particular day. I may have wrote it down the next day.

Q Do you send a copy of the Accession Report to anybody?

A. Not usually. We usually send a letter giving the results.

Q Did you do that on each of these occasions?

A. Yes, on the 17th I sent a letter. I also called Mr. LeRiche on the 10th, too.

Q Who did you send the letter to on the 17th?

A. It went to Mr. LeRiche, and I sent a copy to Mr.

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as any other diagnosis, I was only interested in the results of the histopathology examination.

Q With respect to those birds, did you observe whether or not there was any fat present?

A. Yes.

Q What did you observe in that regard?

A. One of them had alightly fatty liver; that is it.

Q So I take it, Doctor, you never made a diagnosis of leukosis?

A. No. As far as looking at them grossly, none showed Marek's Disease, or leukosis. Marek's Disease is another type of leukosis, and there was no lymphoid leukosis.

Q We talked about lymphoid leukosis and a little bit of Marek's Disease, or I guess another witness did. Doctor, what is lymphoid leukosis and Marek's Disease, and how do they look grossly in cases where they exist?

A. We differentiate the two of them. To be scientific, they are two different viruses. One causes lymphoid and one causes Marek's Disease. When we examine birds that have either one of these conditions, they are tightly produced tumors. The distribution of tumors may be a little different with these two different diseases, but when you first look at them, many times without even opening them, they are usually very thin, emaciated birds. You expect this in any kind of animal that had tumors that

involved any vital organs. You expect them to lose weight, and so forth. In the case of lymphoid leukosis, probably the most two common organs we see involved is the liver and spleen. The liver may be very large; it may have very large white tumors in it, whitish-gray tumors, or may have hundreds of very small tumors. The same with the spleen. The spleen may have large--the normal spleen might be this size here. (Indicating) They could each get this big--the spleen--and the same applies to that. They may have quite large tumors in them, or they may have a lot of smaller ones. Also, we can get tumors in other organs, from lymphoid leukosis, in the kidney and so forth. In the case of Marek's Disease, in the old days they were called "range paralysis". One of the things we used to see was enlarged nerves, and this might be in the leg, or the wing, or even in the neck, and these birds would be paralyzed in one leg, usually, or have a wing drooping, or their head might be twisted to one side. We would see enlarged nerves with the tumors in the bird. They would also have tumors. It is not uncommon to see them--it is not uniform to see them in reproductive organs, in the kidneys with Marek's Disease, and some times we see them in the muscle, the breast muscle. They would be quite obvious if they were in the breast muscle.

Q Was any of that evidenced to you in your examination of

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have here.

Q And, you don't know what their relationship in respect to the time of molting was?

A. No, I wasn't told this. I don't know that, no.

Q Would that make any difference in respect to the weights?

A. I really don't know.

Q Did you make a recommendation of an 18 per cent protein?

A. Yes.

Q I think you testified that that was a regular recommendation that was told to you by the department up there?

A. Yes, I asked Len Mercia in the department, and this is the recommendation at that time for caged layers.

Q Do you know, of your own knowledge, any reason for this?

A. You mean, did I do any work myself to determine this, is that what you are driving at?

Q No. This recommendation was based upon information furnished to you, and not from your own knowledge?

A. Well, that is true. That is the way we learn any kind of information, usually, when we do research.

Q In gathering this information, did you also find out how soon the birds would be effected by the feeding of the recommended protein?

A. No; No.

Q And, you don't know whether they were fed the recommended protein or not?

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RECROSS EXAMINATION

Q (By Mr. Divoll) Doctor Murray, we had a discussion about this matter back on October 18, 1973, did we not?

A. I don't remember the exact date. I believe it must have been October, yes.

Q And, in the process of that discussion, were you shown a chart of egg production of a certain flock of birds? (A document was handed to the witness.)

A. I could have been. I don't recall if this is the exact chart or not. It was a different color. I don't remember seeing this particular one.

Q Probably that is a copy of it, actually?

A. Yes. I think the one I saw was colored.

Q Where it says here, Exhibit "12", would be a yellow tag?

A. That is what I saw.

Q This is a copy. The copy machine doesn't pick up the color?

A. No.

Q Now at that time, did you examine that chart?

A. At the time I saw the birds, do you mean, did I examine this chart?

Q Did you see this chart at the time you examined the birds?

A. I don't recall having seen this chart until you showed it to me in October.

Q And, that chart shows a very dramatic drop on production,

does it not?

MR. DAVIS. I object to that, your Honor, unless the witness---

THE COURT. We are going to sustain the objection to the form of the question.

Q (By Mr. Divoll) I show you the copy of the chart that you examined on October 18th and ask if you recognize it?

A. It appears to be the same.

Q And, is this a production chart?

A. Yes.

MR. DAVIS. Just a moment. May I suggest something? Perhaps I can withdraw my objection.

THE COURT. Yes.

MR. DAVIS. I believe we have the original of that document already marked in evidence, your Honor--not in evidence, but for identification, if I am not mistaken. I suggest if the witness is going to be asked about it, he be asked about the one already marked.

THE COURT. I agree.

MR. DIVOLL. I would prefer it.

THE COURT. Show him the one that is marked.

Q (By Mr. Divoll) Now, I show you the original chart. Is that more familiar to you? (Handed to the witness.)

A. Yes.

Q Now on the chart in the left corner, does it say, "complex

"B"?

A. Yes, it does.

Q What kind of chickens were those?

A. It says, "brown".

Q Would that be the Warren Sex-Sal chickens?

A. Yes, it would.

Q I refer you to your Accession Report 2837, which is Exhibit Number "35"?

A. Yes.

Q And, at the time you made this, had you seen this chart before?

A. Not that I recall. I hadn't seen this chart before, no.

Q If you look at the chart, and it shows, does it not, a---

MR. DAVIS. We object to the reference to the chart unless it is going to be received in evidence, your Honor.

MR. DIVOLL. Well, I can have it marked as my exhibit.

THE COURT. You can offer it in that form, if you wish. Do you wish to offer it?

MR. DAVIS. I would like to offer it as our exhibit. It is already marked for identification.

THE COURT. All right, we'll have it admitted as Plaintiff's "12".

(Plaintiff's Exhibit "12" was received in evidence.)

THE COURT. It will be marked in connection with the testimony of this witness upon cross examination.

Q (By Mr. Divoll) Now I show you Plaintiff's Exhibit "12" and ask--I assume you are familiar with these type of charts?

A. I don't see too many of them, actually.

Q You know the purpose for them?

A. Yes, to keep track of the production.

Q Look in the months of May and June of 1972, and what does the chart show in respect to the production records?

A. It shows a drop in production from 50 down to 35.

Q Now in your experience, is this an unusual situation?

A. Well, ordinarily you wouldn't expect to get sharp drops in production.

Q And, would it have made a difference in your analysis if you had known this at the time of your accession report?

A. Not necessarily. It depends a lot on what caused these drops. It may, or may not.

Q Would it have been significant in your examination?

A. I don't think it would. I mean, it might have helped previously to seeing it to have seen the birds at that time, but I don't think it would help me at all at the time I examined the birds, no.

Q Does the drop in production indicate anything to you?

A. Well, it indicates that something happened to the birds; whether it was environmental or disease, or something, it indicates that some kind of a stress hit these birds.

MR. DIVOLL. That is all I have.

THE COURT. Anything further, Mr. Davis?

MR. DAVIS. I think that is all we have of Doctor Murray, your Honor.

THE COURT. Thank you, Doctor Murray.

MR. DAVIS. May we approach the bench, your Honor?

THE COURT. Yes.

(Discussion at the bench off the record.)

EVERETT SANFORD BRYANT, Sworn

DIRECT EXAMINATION

Q (By Mr. Davis) Would you tell us your name and residence, please.

A. Everett Sanford Bryant, 389 Browns Road, Storrs, Connecticut.

Q What is your occupation?

A. Veterinarian for the University of Connecticut.

Q Where were you educated, Doctor?

A. At the University of Maine and also at Cornell University.

* * *

A. I am licensed to practice veterinarian medicine in Connecticut, Maine, New Hampshire and Vermont.

Q How long have you been licensed?

A. I took these four state boards when I first graduated in 1964. At that time, I felt I would still be able to get the boards and might possibly have use for them later on, so I took just the four boards.

Q What do you mean, "taking boards"?

A. State board examinations are given in each state. The licensing of veterinarians to practice veterinary medicine is controlled in each state by its licensing bureau. In Vermont, I think it is the Bureau of Environmental Equality. I am not sure. It is handled by a board of licensed veterinarians in the various states. In the State of Connecticut, it is the Commissioner of Agriculture Education that handles the licensing.

Q Doctor, is there any difference in the methods and practices of a specialist like yourself, working at a College of Agriculture and doing this sort of work for the general public versus a veterinarian who practices out in the field and has an office somewhere?

A. I suppose it has similarities; it has differences. Certainly, it has great responsibility. We are handling an awful lot of cases. We have to handle clinical material and use clinical methods like we do in treating dogs and

cats. We still have the same responsibility to see the cases are handled on a clinical basis, follow up; follow up of these cases. If we don't respond, we usually know pretty quickly the farmer is dissatisfied. He comes back in, and he wants to know what to do in the future -- if this doesn't respond. I would say what we actually do at the University of Connecticut when I am not teaching in research, when I am actually handling the diagnostic laboratory is very much like a clinical veterinary practice.

Q You used the word "clinical" several times. What do you mean by that word?

A. A clinical practice, or a clinician, is one who deals directly with the people, and with the case, who not only makes the diagnosis, but comes up with the treatment and then handles the business part of the practice. A clinician is a person you see when you take your pet dog into get him repaired.

Q You used the word "avian" a number of times. What does that word mean?

A. Avian is an adjective for the word "aves," as the class which poultry; in a biological system, the class is aves/where poultry belongs--poultry, turkeys.

Q In your work there at the University of Connecticut, have you devoted a substantial part of your time to the avian veterinarian activity?

A. Yes, I am full time poultry; full time avian.

Q Of that time, part of it is teaching and the rest is working in clinical work and in the laboratory, is that right?

A. Right. I have an extension appointment which allows me to not only do the clinical work in the laboratory, but also go out in the field and visit poultry farms. We are three area poultry management specialists which I have the charge of working with them in co-ordinating problems that may possibly be related to management and disease, intertwined, but we work these out together. So, I work with these people in the field, clinically, as well as in the laboratory.

Q Now, going back to our particular problem, did there come a time in the fall of 1972 when you went to the LeRiche Farm in Hardwick , Vermont, or the Vermont Food Industries Farm, I should say?

A. Right. As I remember it, I had received one or two accession reports brought in by Doctor Edmund Hoffman, who, at the time, was working with Mr. LeRiche, and then I guess the recommendations weren't followed or something, because then he called me up and wanted to know if I would do some more work with the operation, and I felt at the time instead of doing more material that we had better visit the farm and see what the situation looked like,

as well as bring back specimens. I wanted to pick these specimens up myself.

Q So, you had actually seen some of the birds before you went there, correct?

A. Yes. They had been submitted to our laboratory.

Q And, the birds that had been submitted to the laboratory were brought in, as you testified, by Doctor Edmund Hoffman, is that correct?

A. Yes.

Q Did you know him before that?

A. Yes, we have worked together on problems.

Q And, what is the nature of his doctorate?

A. Doctor Hoffman is a Doctor of Philosophy in Nutrition and also in Genetics. I believe he has a Master's Degree in Genetics.

Q Does he live somewhere near the University of Connecticut?

A. He now lives in Nova Scotia, I believe.

Q But at the time of the trips he made to the laboratory, was he living somewhere in Massachusetts?

A. Doctor Hoffman was General Manager for Hartford Live Poultry Company for awhile, based in Willimantic, Connecticut, about eight miles from my laboratory. So, I worked with him quite a bit with those birds. I am not sure, but it is possible at this time he might have been with that company. I think he retained a residence in Connecti-

cut or Massachusetts somewhere.

Q Showing you some Accession Reports Numbered "41," "42," and "43," could you identify those for us please? (Handed to the witness)

A. Number "40," dated August 22, 1972, is the first accession that was submitted to my laboratory from the farm of Vermont Food Industries. They were submitted by Doctor Hoffman. There were five birds examined, and I did this case. The diagnosis was fatty liver syndrome. Number "41," I guess, is the second submission on September 28, 1972, and this likewise was from Vermont Food Industries, submitted by Doctor Hoffman. Number "42," November 16, 1972, was the result of Doctor Hoffman and I visiting the farm and posting birds on the farm, doing autopsies on the farm, and bringing back the tissues I felt had disease changes in them and checking those out in my own laboratory, and the same way with Number "43". Number "43" were the White Leghorns in "C" building; Number "42" was the Sex-Sals, or the reds, same type of birds, and the same birds in---

Q You say, "same birds". A Sex-Sal and red are the same bird?

A. A Sex-Sal is a geneticist's strain of Rhode Island Reds; it is a specific breed of Rhode Island Reds.

Q So those four accession reports represent work done by you,

is that correct, or three of them?

A. The first one, I did; the second one, Exhibit "41," was done by Doctor Van der Heide who works with me in my office, and Numbers "42" and "43" was work that I did, yes.

Q With reference to "41" the report is the result of work done by Doctor Van der Heide, is that correct?

A. Right. Number "41" is two different flocks, and they were brought in by Doctor Hoffman. Doctor Van der Heide was on duty that day, and he and I share the laboratory, and we usually alternate days, so he happened to be on that day and did the birds for Doctor Hoffman.

Q And, you weren't present at the time?

A. I was not present for this autopsy, I don't believe. I don't remember if I was. I can't remember.

Q You don't remember being there on that occasion?

A. No.

Q Now, with reference to the first one in this series, that will be Number "40," is that correct?

A. Right.

Q What was the date again?

A. The date was August 22, 1972, Accession Number 6230-34. These accession numbers just refer to the fact that it was this particular year, the year 1972. The numbers refer to individual birds: S6230 refers to Bird One; S6231 refers to Bird Two and so forth. We keep everything

on an individual basis.

Q And, there were five birds in that work?

A. There were five birds in the work, right.

Q What do you do with respect to the actual laboratory work on that occasion?

A. Well, according to this report, we did the work 9:10 a.m. in the morning, and apparently this must have looked to Doctor Hoffman like sort of an emergency, so he asked me to do the case immediately. I presume he wanted to get an answer back to the person with whom he was working. So the girl takes the history, takes the information about the flock number; namely, in this case, five birds examined. They were Sex-Sals; the age is 36 weeks; the number alive was five, and the number dead was zero when they came to us. These birds were bought from DeKalb Warren, and in our history it says, "Recent medications, choline B-12, Vitamin E," and it doesn't say anything about a recent diagnosis, but apparently they were field treated. It mentions that the production is 54 per cent. They peaked at 66 per cent about three weeks ago, and it mentions that there was no significant mortality in the flock. This is the history. Now, we try to read these histories carefully before we do the post-mortems. Then live birds, of course, must be carefully put to sleep in a humane manner, and they are autopsied, a gross autopsy. The

thing that we do is to open up the bird carefully, look for any internal changes that would suggest damage to a particular system. I think, as I remember these birds, the striking thing about them was--as they were put on the table, some pathologists wet the birds down, some don't. I always like to reduce the dust as much as possible. I always wet the birds down with a little soap and water, and the striking thing was the abdomens were very full of fat, and at the autopsy, as we opened them up, the fat in the body cavity just sort of plunged out toward me, and I have seen numbers of these cases. We have had numbers of these cases for several years in Connecticut, and so we then look for other diseases which may be present, the suspicious signs which might be there, and, of course, rule out any infectious diseases. I, personally, consider this a nutritional problem. I have never been able to find any infectious agent that would cause this condition. So on autopsy then, we look for other things, and if we don't find other things, and certainly in this particular case, the birds were quite greasy, and the liver was yellow, and that sort of thing, and it just sets all the criterion for the diagnosis which, in this case, was fatty liver syndrome.

Q All right, what do you mean by that phrase, "fatty liver syndrome"?

A. In "fatty liver syndrome" the word "syndrome" suggests that it is not very well delineated yet, but we see a set of characteristics that has been written up by many, many people now. So, I am sure it is going to be accepted as a specific disease eventually, but a set of characteristics which involves extremely fatty deposits, an extreme amount of fatty deposits in many organs in the body; a large amount, or a large packet of fat in the abdomen. Then in the surface of many of these organs we see a little fat deposits or lipoid bubbles, sort of, and when you handle these birds they become very greasy, and you find very quickly that these birds are just a little bit slippery to handle. This is very typical of fatty liver syndrome. Also in advance stages you will find frank hemorrhages, real outright hemorrhages where the liver has ruptured and blood vessels have ruptured, and internal bleeding. In many cases hemorrhages can occur within the center of the liver, and we won't see anything on gross. We will just see histopathologic microscopic changes which will show healing as far as this sort of thing.

Q With reference to this syndrome, this fatty liver syndrome, is there any result in terms of egg production of a bird who has this condition?

A. Right. Yes, there is lowered egg production. This is

accepted now in the field. Most of the cases that we see, the reason we see them is not because of deaths in the flocks, usually, what we see first is that the production is starting to drop. The birds don't come up to what we call "peak". The normal production cycle of a flock comes up to a peak and starts to level off gradually. These birds never came up to that peak that the genetic constitution says they should come up to.

Q Doctor, do you serve on any committees of the National Veterinarian Association?

A. Unfortunately, I have other tasks which take too much time. The Association of Avian Pathologists, which is a group of poultry disease research working for the United States and Canada have a board. I am a member of that group, and we have a board of directors, and I have to represent the Northeast United States and Canada in that area, yes.

Q Is that a committee called a nomenclature committee of some kind?

A. Yes. "Nomenclature," of course means naming of disease and I am on the nomenclature committee for that organization.

Q Is that the committee that defined this condition you referred to as fatty liver syndrome?

A. Right. The definition of diseases and defines of

of disease names is the responsibility of this committee and disease names evolve quite like words going into a dictionary. When they become accepted in use, then they are added to the list of nomenclature.

Q I would like to have you look, Doctor, at a series of cards here. Let me get them in sequence, if I may-- Numbers "2," "3," "4," "10," "12," "16," and "18". Have you seen those charts before testifying today, Doctor? (Handed to the witness)

A. Have I seen these charts?

Q Yes.

A. Just laying around the courtroom as they passed them around for other people to look at. I haven't studied them.

Q Do you see the ink curves that appear on the various charts?

A. Yes.

Q Assuming those are accurate curves, Doctor, do those show low production consistent with what you would expect to see if a flock were suffering from this condition you have defined as fatty liver syndrome?

A. Yes. I will be more specific. I haven't had much experience with graphs, but lowered production from fatty liver syndrome is pretty well accepted to be any where from twenty to thirty per cent reduced of what the normal

graph should be, and I would guess these are within those limits. These are under the normal for the breed.

Q So you would expect if a flock were suffering from this fatty liver syndrome to see the production dropping any where from twenty to thirty per cent, is that right?

A. Yes. This has been our experience in Connecticut. We have had a number of flocks this way.

Q Now, the diagnosis you made on that first accession was fatty liver syndrome, Doctor, but did you find anything else in connection with those birds at that time?

A. I found nothing that would be significant of a flock problem.

Q Well, you used the words "flock problem". What do you mean by that?

A. Well, when my poultrymen come into me, and they have a problem, if it is death, the birds are dying, they want to know what the problem is that is affecting the whole flock. Now, if they lose 25 firds a day and they bring me in a sample of a bird to post from these dead birds, and seven are showing coccidiosis, a parasitic disease of the intestines, and one may be showing Marek's Disease, the cancer of the chicken is Marek's Disease, they want to treat the coccidiosis. They don't want to treat the incidental finding. Enteritis problems, we see this from birds with an incidental bacteria problem and a little

enteritis, this is not a flock problem, this is an individual bird problem. So what they want me to do is tell them, I guess, the things that can help them the most, and that is to tell them what the problem is with the total flock and to handle the case accordingly.

Q And, with respect to all five of those birds, Doctor, in that first accession, were they all of the same condition? Namely, this excessive fat, this fatty liver syndrome?

A. Five out of five showed the same lesions, right.

Q Did you do anything with respect to determining their production at that time?

A. My determination of egg production is quite impersonal. I don't try to, in my limited time I see these birds, I don't try to tell how many eggs they are going to lay next week, or that sort of thing. I just decide if they are out of production at the time I see them, and whether they are in production, and I do that by looking at the gross ovary. The ovary will have a cluster of egg yolks on it; if the bird is in production and laying well, there will be yolks on the ovary at different stages of formation. The yolks, when ready to be released, the one that is going to be laid tomorrow will be larger and get really swelled up ready to go. This yolk lets go and goes down the ova duct, picks up its egg shell and eventually out

into the great wide world. What I determine is whether that ovary is shrinking back and the birds is not laying or whether it is. I don't try to determine anything more than that.

Q Did you make some determination with respect to the first accession?

A. Yes. Bird Number One was in production, very fat, and yellow liver, and all the other four were out of production, but they had the same fat; big fat birds.

Q Did you determine the existence of any disease in any of those birds on that occasion?

A. No infectious disease was found, or it would have been noted; no other disease signs or lesions was found, or it would have been noted on the report. Other than the fact these birds were very fat, there was no disease.

Q Now, did you do some more work with respect to these birds after that occasion; namely, September, or rather August 23, 1972, Doctor?

A. I think with that accession, Exhibit "40," the only thing that was done was the post-mortem at the autopsy table. We saw no reason to do any more definitive tests because the answer was right in front of us. It has been my experience when you find a set of conditions like this, coupled with a history of low production, that this is the diagnosis.

Q Did you make any recommendations at that time with respect to treatment?

A. Yes. We had been using, in Connecticut for a year or more at that time--I guess maybe a couple of years--we had been using a product that we called oat hulls. I also have to spell that because my Maine accent doesn't really give the right, give it the right connotation, I guess, but these are the jackets of the oats, and it is a very low energy, a real high fibre type of product, and we found by going into the diet, adding 6 per cent, about 120 pounds to the ton for about four weeks--28 days--that we can dilute it, because of the excess fat in these birds, to the point where they will respond and come along pretty good. So this is my recommendation, and that was to go with 6 per cent oat hulls for twenty-eight days.

Q What, in your opinion, Doctor, causes this fatty liver syndrome?

A. Well, we have been able to find no cause other than too many calories, too much energy calories, too high energy intake.

Q What does that come from, in your opinion--the calories?

A. Where do the calories come from?

Q Yes.

A. Well, they come from the diet. They can't come from the air, or the water. It has to come from the feed....

Q And, then is it your opinion that the feed is what causes this excess fat condition and produced this fatty liver syndrome?

A. If the feed is the only source of calories, this is the only place it can come from; right.

Q In your opinion, is there any calories in water?

A. No.

Q So there isn't any other source of calories other than the feed?

A. Not on a commercial poultry farm.

Q So you recommended this 6 per cent oat hull diet for these birds in order to reduce the energy content of the feed, is that correct?

A. This is what we think, in our institution, is doing the job. What we are prepared to say is, we have handled quite a large number of those cases, and we have got a response many, many times with this type of recommendation in Connecticut, and Connecticut, I think, has been blessed with quite a large number of these type of cases. So maybe I have had more experience than I should have had with it, but we found by using this standard treatment, under these standard set of conditions, we get a good response.

Q Have you been involved with some study work in connection with this particular matter, Doctor, in the recent past?

* * *

A. Kidneys would be the same. I don't see why it wouldn't be the same.

Q Do you have some opinion with respect to the other organs?

A. Of course, the liver seems to be the target organ in this disease from what we glean from clinical observations, but in addition, the kidney may not be doing its function the way it should. I don't believe any one really can answer this unequivocally what happens to cause the lowered production, but with the large number of flocks we have seen with this condition, it always follows, you get lowered egg production.

MR. DAVIS. I would like to offer at this time, "40" through "43," inclusive. By agreement of counsel, your Honor, even though Doctor Van der Heide prepared Number "41," it is agreed between counsel that I can ask questions of Doctor Bryant with respect to "41". He does have knowledge of this, and we did depose Doctor Van der Heide, but unfortunately, his deposition hasn't been returned to us; that is, the typed deposition hasn't been made available from Connecticut.

THE COURT. You are agreeable to this, Mr. Divoll?

MR. DIVOLL. Yes, we are.

THE COURT. All right.

Q (By Mr. Davis) Doctor Bryant, you didn't tell us anything

* * *

A. Well, eight birds were examined, all Sex-Sals--these are the reds. They were now 40 weeks of age. This was on September 28, 1972 and brought from DeKalb-Warren. The code that we used in our office--my girl gave it a code of "A" and "B". Apparently, when Doctor Hoffman brought these into Doctor Van der Heide, he told him they were two separate cases, two separate flocks, keep them separate, so this code "A" and "B", as I understand it, is what she gave to them. So, the first four birds he did are what we call "House "A"".

Q Excuse me. According to the report, those four birds were fed on Purina feed, is that correct?

A. The code at the top and history, production, House "A", were fed on Purina feed.

Q All right, are there four other birds there identified by "B", is that right?

A. Yes, the code says "Pease B".

Q So the first four birds listed are birds fed on Purina feed and the other four birds were fed on Pease feed, is that correct?

A. Right.

Q Okay, and could you tell us what the findings were on each of the first four birds?

A. First four birds, three out of the four showed fatty liver syndrome. The same three out of four were not in

production. He describes it possibly a little different than I do maybe, but he found a yellow liver. The liver was brittle; just the same as saying it is friable, and excess body fat. So three out of the four were showing that, and the next group, do you want me to relate that?

Q Yes, with respect to the birds fed on Pease feed.

A. The first one was not in production, and he didn't note any lesions. The second one was about the same, the first three showing no problem. The last one, one out of the four, showed excess body fat, and he says yellow liver and somewhat brittle.

Q So that of the birds fed on Pease feed there was only one that showed any excess body fat, is that correct?

A. Right.

Q Whereas, the birds fed on Purina feed, there were three out of four that showed that?

A. Right.

Q Is it, in your opinion, Doctor, unusual to find any bird, from time-to-time, in a flock that has some evidence of excess body fat?

A. No, no. I think all flocks have individual conditions like this, and I think in this case, all we can conclude is that this was a bird that was excessively fat. There was no hemorrhage that he mentioned.

Q If you took the two flocks as separate flocks, Doctor,

would you tell us what your opinion would be with respect to the flock that was fed on Purina in terms of a condition, or a problem, versus the Purina flock versus the Pease flock, excuse me.

A. Just based on this one diagnostic report?

Yes.

A. Of course, we know quite a bit more about the Purina fed flock. I think this is the same one that came in the other accessions. The Pease fed flock appeared to be almost like a normal flock as far as lesions results are based on. These four birds, we could see nothing abnormal. Now with the reds, with the Purina fed Sex-Sals, they were showing the same fatty liver syndrome that we had on the other accessions.

And, the Pease birds were not showing it?

A. The Pease birds were not, I wouldn't say, enough to constitute a fatty liver diagnosis.

I would like to call your attention, Doctor, to that part of Number "41" which relates to histopathology.

A. Right.

Would you tell us what the report showed there with respect to histopathology?

A. "Livers, small nonomclear infiltration". To say, in other words, these are little spots of cells which are-- usually come around when there is an inflammatory process,

* * *

Q Are there recommended energy levels?

A. Nutritionists formulate feeds with certain energy levels in mind, right.

Q And, you do not know, personally, what their recommended energy level is, I take it?

A. They vary. Nutritionists differ in their opinions of this, and I don't know any formulations.

Q Now, do you know, or did you make inquiry into the energy level into the feed that these birds in this Exhibit Number "40" were receiving?

A. No, it would be impossible for me to find out the energy level, because most feed companies don't divulge their formulas at any rate, any way, and my only contact was with Doctor Hoffman, and, eventually, with the owners of the birds, not with the feed company.

Q So when you say that these birds had fatty liver syndrome because of their too high energy intake, you don't really know what their energy intake was, do you?

A. I have no way of knowing what the energy intake was in the feed they were getting. My only experience is that in order to produce this condition, we usually see an excess energy intake.

Q Then how can you say that these birds have fatty liver syndrome because of high energy intake when you don't know what the energy intake was?

A. We know by diluting the energy in thousands of other

* * *

Q And then it shows that in one week they drop from fifty per cent to thirty-six per cent?

A. They didn't come up to peak. They didn't keep going up to peak, according to the overall graph.

Q They were well started on the normal rise to peak, were they not?

A. They were on their way up to fifty per cent, yes.

Q Now, would your fatty liver syndrome cause this sudden drop when they reached fifty per cent from April 17th to May 22nd? I think it is approximately four weeks.

A. What we usually see with fatty liver syndrome, they just don't continue on much above the figure they get to and just leave off. I would say that is quite a precipitous drop from fifty to thirty-six per cent. I can't believe the flock went like that, but I don't know. I am not familiar with their production records.

Q Did you believe that fatty liver syndrome caused that drop?

A. Fatty liver syndrome caused that kind of a drop?

Q Yes.

A. No, I don't think so. I would think with fatty liver syndrome it would level off and not go any higher. I would say with a flock with a bad condition, it would just stay there and not go any higher, but not drop to thirty-six per cent.

Q You were in the courtroom yesterday, were you not?

* * *

A. The little hills and valleys, right, the little differences, right; five or ten per cent each week, there probably would not be eratic weekly production differences would not be probably due to fatty liver.

Q From your experience in working with the farmers--chicken farmers there in Connecticut, could stresses have caused these ups-and-downs?

A. Stresses in old type housing can affect birds, but I think if I remember correctly, in Mr. LeRiche's houses, they are in environmental controlled houses. I wouldn't expect to see too much in the way of stress coming into play in his operation. I think his chickens probably have better air and clean water and this sort of thing than some of our ghetto families in Connecticut do. The environment is very good there.

Q It is obvious from this chart, isn't it, along after this drop on May 15th to the 22nd, that the chickens never resumed the expected normal?

A. True.

Q Now if this is a production chart, then it follows that they were never up to production after that point, or their normal production?

A. True.

Q Now, what if a bird eats for its energy requirement and continues eating and it is not laying eggs, what is the

feed doing to that bird that it is consuming?

A. It is laying on fat; excess fat.

Q So would this fatty liver syndrome that you show here be caused by the birds not producing?

A. Would it be the cause of the effect, is that what you are asking?

Q Right.

A. Right, and this is a very good question and it is asked many times. We usually see the fatty liver syndrome first. Many times it goes along for a long time before it is diagnosed. Birds coming into production being housed that are too fat, too good condition, will start off right away with low level fatty liver syndrome.

Q Aren't we sort of faced with the old cliche, "which came first, the chicken or the egg"? And, isn't fatty liver syndrome caused by the birds not producing, or is the lack of production caused by the fatty liver syndrome?

A. Of course, we feel in our clinical experience with these flocks that flocks that came into production not overly conditioned in the first place don't have the fatty liver syndrome, but when they become over-conditioned and get too fat is when we see the dip in production. I think what you are saying here is that these birds were affected quite early in life with this condition and went undiagnosed.

Q Doesn't the chart show that in May, around the 15th to the

* * *

that was.

Q Do you have Exhibit "41" there?

A. Yes. Exhibit "41" is Doctor Van der Heide's accession.

Q And, are these Warren Sex-Sal birds?

A. Exhibit "41" dated 9-28-72?

Q Yes.

A. Warren Sex-Sals, right; forty weeks of age.

Q I think from the testimony, four of these birds came from complex "B" and four birds came from the homosote building, that was testified to by Mr. Morrill yesterday, that were being fed by the Pease Grain Company?

A. Yes.

Q Now you stated from your examination that the Purina fed birds showed a fatty liver syndrome, but the Pease birds appeared to be a normal flock?

A. Doesn't the exhibit show that three of the Pease birds were not in production and that the fourth bird had excess body fat, yellowish liver somewhat brittle?

Q Yes. So how is it normal out of four birds to have three not in production? There is nothing said whether the fourth one is in production or not, but it has excess body fat, yellowish liver and somewhat brittle.

A. Based on a four bird sample, it is not unusual to have one or two birds that have extra body fat from a normal flock. Also, it is my understanding that these birds were

all raised together, and that these birds were quite--I guess you mentioned they were in quite good condition when they first came into production, and apparently the only difference is that the Pease feed that they received after they were housed, I would suspect, is only when they came into production had a little bit of this, but apparently on the Pease feed they didn't have the problem; the problem was resolved, I guess.

Q Well, apparently on these four birds that didn't resolve by making them lay eggs?

A. Well, here again, one bird out of a 4,000 bird flock is hardly a sample to incriminate that particular flock. Also, three birds, out of the 4,000, out of production is not unusual.

Q Now, that was four birds out of around a forty-five hundred bird flock, is that correct?

A. Well, my records show 4,000, but give or take five hundred.

Q Okay, give or take five hundred, and you have nine birds from, we'll call it the sister flock, out of approximately 25,000 birds. Do you think nine birds is a fair sample?

A. I suspect that in doing diagnostic work we are always dealing with samples that are too small, but there is no other way out of it, and this is one reason I travel to farms to post on the farm and handle a lot of other birds,

* * *

itself. If they were there, I didn't make note of them in these particular cases.

Q Would they be visible by a gross examination?

A. Yes. I think we noted this in the notes that there was one that went only to the farm, I think, with numerous hemorrhages on liver surface. We take sections of the liver. It is possible to cut a plane in a way that would miss these hemorrhages.

Q Now returning for a minute to fatty liver syndrome, has it been designated as a disease?

A. No, still a condition. It is not established. It looks like a separate and distinct entity, and it is being reported over the country under the term "fatty liver syndrome," but until more research work is done on it, and the cause completely established, why it won't go into the nomenclature as such.

Q Now in your recommendation of the six per cent oat hulls which was to lower the energy, would increasing the protein accomplish the same result?

A. In order to increase the protein, the energy would automatically go down somewhat, I suppose, and an increased protein helps burn up more energy as you are digesting the protein. Here again, this is probably a question for a nutritionist, but when you digest protein you use up energy to digest it. If you give a higher energy diet--a higher

protein diet, I am sorry--a higher protein diet, as this bird eats this diet, she is automatically using energy to help digest that protein. So she is using up some of this energy. In effect, you might say the energy is going to be expended more quickly.

Q And, with the six per cent oat hulls that change of feed became effective over a 28-day period, how long would any ordinary change of feed take to become effective in the chickens?

A. An ordinary change of feed, it would depend on what that ordinary change in feed was.

Q Well, if it was a change from one brand of feed to another.

A. Well, let's put it this way. I think what you are asking, if the energy level was, say, reduced by one hundred calories per pound, if a flock was on an energy level of thirteen hundred fifty calories and you went on to a brand of feed that only had twelve hundred fifty calories per pound, how long would it take for this to show up? It would depend on the condition of the birds at the time; depend on their eating habits, and this sort. I don't believe I could answer that question for you.

Q Now turn to Exhibit Number "43;" that is the White Leghorn birds you examined, or received on November 16, 1972, and did a final examination on November 30, 1972, is that correct?

* * *

Q OK.

A. Actually some of them showed coccidiosis too. If --

Q Would you explain what that is?

A. Yes, this is a protozoan infection of the intestinal tract, which if severe enough can be fatal, certainly very debilitating.

Q OK. Would any -- Would any of these, -- well, obviously the coccidiosis you said was -- would any of these other diseases be fatal?

A. Yes. Marek's would be. Lymphomatosis could be. Presumably the two with the gout, I presume died with the gout because he brought in -- the birds he brought in before were dead. Two of those that were dead showed these signs of gout. This is sort of a terminal change, that's how we see it.

Q So they died of the gout, rather than suffocation --

A. Oh, they died of whatever caused the gout, I guess.

Q OK. Would any of these diseases cause reduced production?

A. Marek's could; lymphomatosis could; the coccidiosis could.

Q OK. So any of them could; gout would not.

A. Yes. I would even venture to say that the tendonitis might, too, because they -- they're not able to hop around as they should, there. They are lame.

Q OK. I'm going on to report 350.

* * *

A. Well, certainly the number of birds submitted, a high proportion of them every time showed evidence of Marek's disease and/or lymphoid leukosis. I mean 14 birds at this point and 12 of the 14 examined showed lesions that were compatible with these two conditions, one or the other of these conditions.

Q And up until this time, you had posted, let me count them, about 53 birds, according to my count?

A. I presume so. I haven't totalled them up.

Q Was there anything in evidence in this flock that would cause production problems?

MR. CLEARY. Up until January 25, 1972?

Q (by Mr. Schobel) I'm sorry -- I'm sorry. I'm talking about up until the 25th.

A. I never did see the flock. How do you mean? From what I saw?

Q From what you saw.

A. That could cause production problems? Well, as I have said before, Marek's disease could cause production problems.

Q OK. Would you say that this was a fairly serious case of Marek's disease, a fairly serious situation?

MR. CLEARY. If you know, Doctor.

Q (by Mr. Schobel) If you know.

MR. CLEARY. And what does he mean by serious?

Q (by Mr. Schobel) One, if you know, and what do you mean by serious?

A. Without looking at the flock as a whole and having some idea of the mortality, and actually relating the causes of mortality to -- of these conditions, I can't say. These are basically presented to me for examination. There was a high percentage of the birds presented to me showing these lesions, but when you think in terms of 27,000 birds, there's quite a few birds there compared to the numbers that I saw.

Q Up until this time do you recall any evidence of the birds being overweight?

A. No, I'm afraid that I don't -- I can't say anything on that point. I have -- I really have no -- no recollection.

Q Is this something you would normally note in a report such such as this?

A. If -- If -- Probably if I were desperate to report something else. Or desperate for something to report. Put it that way, I mean, if -- if there was some -- some sort of definite reason the man brought the birds in to us. He -- He couldn't understand, say, why production was falling or was dropping and so forth, and we would be looking for -- looking at them rather carefully for a whole host of -- of possible causes of this. In all the birds we examined so far, the -- the -- the main thing we found,

as I said, was Marek's and leukosis and that's probably, you know, what we -- we sort of settled with that diagnosis. We didn't notice anything in particular in terms of -- of overweight at this stage.

Q Wouldn't overweight be important considering the Marek's and lymphoid leukosis?

A. Important in what way are you thinking?

Q Important as causing problems in the flock, production problems or mortality problems or whatever kind of problems he was having.

MR. CLEARY. With respect to the correct question, which disease are you talking about, with respect to which problem? I think there's about four questions in one in there.

Q (by Mr. Schobel) Considering that Marek's disease obviously was in the flock.

A. I will -- I will, I will say this at this point: At, at this point, on the basis of what I have noted down here, I don't think that, that overweight would have been much of a problem; otherwise we probably would have noted this.

Q OK.

A. This is -- this is, well, this is 1972 and we've looked at quite a few birds, and without having this information written down, I would hate to just say categori-

cally, no or yes.

Q OK, now we turn to 638. It's ten White Leghorns from Dostie, once again. It's dated March 21, 1972. Now, the diagnosis appears to change at this point. Would you go into that?

A. Well, of the birds that he submitted, three of them, and again these are not categorized, three of them showed lesions which were compatible with the diagnosis of Marek's and we noticed what we called fatty liver syndrome in six birds, which would imply overweight and liver changes which we feel go -- are compatible with this diagnosis.

Q Would you be more specific in defining fatty liver syndrome?

A. Well, these are birds that seem to have, I mean, I, whether that, what I see now is what I saw in these, this is not what I'm trying to say, because I, I can't do this, but I, in order to make a diagnosis of fatty liver syndrome, I would certainly have had to have seen great quantities of fat in these birds, excessive abdominal fat and characteristic lesions in the liver; the livers instead of being the normal, nutmeg brown color would be sort of yellowish, probably with hemorrhages, petechial hemorrhages or in some cases, real hematomas, in other words where you've got a leakage of blood under the liver capsule. And we did see these lesions.

Q Well, were the birds as a whole fat or was just the liver fat?

A. The, the birds that I wrote a diagnosis "fatty liver syndrome" would have been on the whole that.

Q So this, does this mean to you an overweight bird?

A. Beg pardon?

Q Does fatty liver syndrome mean an overweight bird?

A. Well, it suggests fat. For some reason these birds seem to be depositing tremendous amounts of fat in their bodies. That's what we, we call fatty liver syndrome.

Q OK. I notice at this point you didn't make a recommendation. Is this, do you normally as a practice make a recommendation for something like this?

A. No, only --

Q As a suggestion?

A. Usually only if I think there's any point to it or if we're asked for it. In this case we were just asked to look at these birds and, and describe what we saw and that's what we did. The thing is, with many of these autopsies, the man who brought them in is probably there while we did them. And we probably talked. This is one of the reasons why these reports are somewhat skimpy sometimes, because, you know, and we sort of pass on verbal information.

Q Oliver Libby then, would have brought all these birds --

A. Yes. Present.

Q -- in? He would have given you all the information--

A. That's right. That's right.

Q -- in these reports, other than of course your expert? 639, which was brought in the next day --

A. Yes.

Q -- around March 17th, and this is four birds?

A. Four birds and eggs.

Q All right, will you once again, would you just tell us about that report basically?

A. Well, the eggs were brought in because it was reported that, as it says there, when these eggs were being candled, they exhibited an abnormal color, a green-gray color, and I wasn't sure exactly what they meant by this, whether, I presume, you know, in, in candling the egg, this, this showed up in the shell part, but be that as it may, he asked me to look at these eggs and see if we could see anything, which we did. We opened them up and examined them. They appeared normal. I, they appeared normal, and the, the, the birds showed again similar type of lesions that we had seen in the previous lot.

Q OK.

A. Again, just because I put down fatty livers, that is rather, that's sort of my shorthand, I suppose, for fatty liver syndrome, which is what I wrote down for final, final

diagnosis.

Q So you didn't mean by that, that the livers themselves were fat? That meant the birds were fat?

A. Oh no, not just the livers alone, yes.

Q The livers alone were fat?

A. No. That's not what I mean. I, I, I, when I wrote this down, these were birds from the same, from this, the same group of birds that we previously looked at, and I noted that lesion there again. Fatty livers.

Q OK. What is the caged layer fatigue syndrome? Is that different from the fatty liver syndrome?

A. Well, there is some, some argument on this, I guess. I could be taken to task on this. There, there are a number of things associated with, with, with caged layer fatigue, including changes in the, in the large vessels and so forth. I, I had some discussion with some of my confreres at this point and this is one of the things that they suggested, meaning that after talking with them that this is the whole general complex and they suggested on the basis of what I had found in these overfat birds, with fatty livers, that their ration be cut back to 90% of the feed intake.

Q How would you go about doing that?

A. Well, you could either restrict the feeding of these birds or, I think one of the things I suggested to

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liver syndrome and just a fat bird?

A. Oh, I'm sure there is such a thing, yes.

Q Is, do you -- I don't quite understand and I'd like you to explain it to me if you could: how this fat bird progresses on to what we call the fatty liver syndrome?

MR. CLEARY. Go ahead, Doctor.

A. (by Dr. Gibbs) I, but again, again -- getting back to your question -- I don't think anybody really knows satisfactorily, has elucidated the cause of, of, of the fatty liver syndrome. The current theory as I understand it, is that high energy intakes in feed will predispose or bring on this condition. I think it's still though, somewhat, in an experimental stage. You'd have to probably talk to a, a number of, of authorities in this area. I don't claim to be an authority in this area. I claim to be able to recognize the condition when I see it, or at least I think I can. But as to getting into the nitty gritty or the fine points of the etiology of this condition, I really don't claim to be an expert.

Q Is it a disease, fatty liver syndrome?

A. Yes, if it kills birds, yes. It's got to be.

Q OK.

A. It's pathological change.

Q OK. OK, I'm going along to 656. This is the one where the histo-pathology was done.

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back something. We did do some serology. And we checked these birds out, and again, again this was done at the request of Mr. Libby. We checked these birds out for the presence of mycoplasma; there were two types, and those are the results. They were, they were basically negative.

Q What does that mean? That they're --

A. They didn't have antibodies to the disease in their sera.

Q So in other words, these birds --

A. We did the serology.

Q -- did not have either MS or MG?

A. MG, yes.

Q They did not have it? On this fatty liver syndrome, are you, are you aware of what causes this disease? Or do you know what causes this disease?

A. Fatty liver syndrome?

MR. CLEARY. Do you have an opinion?

A. (by Dr. Gibbs) Yes, I --

Q (by Mr. Schobel) Do you have an opinion as to what causes it?

A. Well, I have an opinion based on what I read and that is that I would think and again, I haven't been reading that, I haven't been reading in this field recently. It seems to be associated with particularly high, high levels of energy in their diet. And this has been experimentally

reproduced on--this particular condition has been brought on in birds by workers at Michigan State, I believe.

Q What do you mean by high?

A. Well, you mean actual percentages?

Q Well, just high--what do you mean by high?

A. Hmmm, that's, that's a good question. I'd hate at this time, as I'm not a nutritionist, I would hate to come up with a specific figure. Your -- in terms of a percentage level, I mean, of, of, of energy in the diet.

Q No, you used the term high and I'm just trying to pin down, I've heard this term thrown around so many times, I'm trying to pin down what is meant by high.

A. I really wouldn't, I really wouldn't like to venture any specific information on, on you know, actual levels, because I don't know them.

Q OK. Well, maybe that wasn't a proper statement then that it's caused by high energy levels?

A. That's, that's what I feel; I mean, this is, this is what I read into the reports I look at, but actually giving a figure which is a more precise way of doing it, I wouldn't care to venture any information at this point.

Q You just stated that Marek's disease could cause reduced production?

A. Yes.

Q And it's your opinion that this --

MR. CLEARY. Go ahead.

Q (by Mr. Schobel) Prior to January 25, 1972, what would you say was the primary problem of this flock?

A. (by Dr. Gibbs) I can't say, because I never did see the flock.

Q What would you say was the primary problem of the birds that you examined from this flock?

A. Marek's disease and lymphoid leukosis, but I had nothing to do with the selection of these birds or anything else.

Q And this would cause reduced production?

A. Well, among other things, it could also cause loss of weight in birds and a lot of other things. I mean, it's--

Q Due to Marek's?

A. Yes; if, if the, if the, the lesions, say affect the ovaries then you do get reduced production.

Q OK. Could the --

A. Quite often the, the reproductive tract is involved.

Q I guess, in your opinion as an expert, could the fact that birds were not producing cause them to become heavy?

MR. CLEARY. Could you rephrase the question, please? I object to it in its present form. It started with, "I guess."

Q In your opinion as an expert, could the fact that birds were not producing cause them to become heavy?

MR. CLEARY. I object to the form, but go ahead and answer it, Doctor.

A. (by Dr. Gibbs) Yes, especially if they were, you know, they were, had a fairly adequate intake. I mean, if they were, they were eating and/or maybe even over-eating, if they were taking, if they had an ad libitum feeding type of thing so that, a free choice feed, and they weren't producing, it is conceivable that they could get overweight, yes.

Q In this case, do you see any connection between the flock being sick with Marek's disease, possibly going out of production, and thus becoming heavy?

A. That's a hard one to answer; state that again.

Q Would you read the question back, please?

(The Reporter then read back the prior question.)

MR. CLEARY. If you know, Doctor.

MR. DAVIS. You mean because they went out of production, they became heavy? Is that what you're asking?

Q (by Mr. Schobel). Right.

A. (by Dr. Gibbs) I think that if the Marek's disease had reached the point where it was, the reproductive organs were involved so that these birds were, were going out of production, that I think there would be a general

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Q How about lymphoid leukosis? What are some of the external signs?

A. These are sometimes a little harder to, to pick up, but, until sometimes the birds are quite advanced; but again, shrinkage of combs, that would be one. These birds would, in many cases, look sick and if you got a feel of them, the, the atrophy of the breast muscle is a very good indication sometimes that something is wrong.

Q Would someone familiar with poultry be familiar with these signs who dealt with poultry on a continuing basis?

A. I would venture to say that he might have a, an idea; yes.

Q The two diseases that we spoke of and that you diagnosed in some of these birds in the early stages of their housing life, were Marek's and lymphoid leukosis; is that correct?

A. Also coccidiosis.

Q Coccidiosis. Did you -- have you already testified that you would expect that there would be a loss of weight as this disease progressed?

A. Marek's disease?

Q Or lymphoid leukosis?

A. Well, certainly if, if a large percentage of the flock were involved.

Q Did you find any evidence in the birds that came in of

loss of weight?

A. Well, I can't answer that because I really didn't --

Q Is a finding of loss of weight consistent with your other findings of obese and fat birds?

A. I don't know what you're driving at exactly.

Q Isn't it a fact that later on many of the birds that you saw were fat and obese?

A. Um-hmmm.

Q And what I gathered from what you said before was that you would have expected in Marek's or lymphoid leukosis, that there would have been a loss of weight in the birds. Is that correct?

A. If I'm, many, on the, on the survey, for the average of the flock, if many birds were involved with this condition, I would say yes.

Q So that if many birds became fat, would it not be a fair conclusion that Marek's disease or lymphoid leukosis was not a major problem?

A. I suppose by inference you would have to say yes.

Q Why is it that you didn't do more of the serological testing?

A. Well, we did, as I said, we did serology in one instance at the request of, of Mr. Libby. I think he just wanted to rule out some of these other conditions but we didn't think that the, the, what we were seeing in the

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the diagnosis of the obesity in the birds with fatty liver syndrome? From what you understand about the problem? Can you define high energy level in terms of results on the birds, is what I'm saying?

A. I don't know, as I understand your question, you say the high energy level in the feed; I don't know what these birds were being fed on.

Q What I'm saying is your, your impression apparently is, based on your reading and conversation with other experts in the field, that high energy consumption is, makes the birds obese. Is that correct?

A. And leads to this --

Q Fatty liver syndrome?

A. Well, yes, it, but on the other hand, it may be a -- it may be something in the birds themselves -- I mean, that, that you know, predisposes them to this, or renders them unable to handle this properly. I'm --

Q This high energy?

A. This high energy, that's right, or the energy that they're taking in.

Q OK.

A. I think the reason why we suggested they, they, they cut down in, in, in the amount of energy they were getting was, and again I don't know what they were getting, but it was just to try to attack this problem at this point.

CROSS EXAMINATION

Q (by Mr. Davis) May I ask you one or two questions, Doctor? With respect to your various diagnostic reports, they begin with an examination in October of 1971, I believe, which would be No. 318?

A. (by Dr. Gibbs) Um-hmmm.

Q And, and with an examination--I'm referring to the flock at the Dostie farm; right?

A. Yes.

Q And the last examination of birds from that farm occurred in March --

A. Well, the --

Q Excuse me, Doctor, did they begin in October 28 of 1971 and end March 28 of '72? Would that be a correct statement?

A. March the 28th.

Q That would be No. 656.

A. 656. The, my, yes, that's right; that is the Dostie farm. Yes.

Q And all the reports, Doctor, from the beginning report, October 28, '71, to and including the one on March 28, '72, relate to examinations of birds brought to the laboratory here at the University of Maine by Mr. Libby from the so-called Dostie farm at Bowdoinham, Maine. Is that correct?

A. Yes.

Q Now, is it also not so, Doctor, that there were no findings of any fatty liver snydrome in your examinations of these birds until the examination of, let me pick up the date here, of March 21, 1972?

A. March 16th.

Q Pardon me?

MR. SCHOBEL. Is that the 16th?

A. (by Dr. Gibbs) Oh, I'm -- we're looking down here; 21, yes.

Q I'm going to ask you that, Doctor, I notice there are two dates on these reports and I have been referring to, in my questions, to the date at the bottom of each --

A. Yes.

Q -- report, where it says, final report date.

A. That's the date the report was sent in.

Q And at the top of each report, there is a date, marked with the words, "date received". Is that correct?

A. Yes.

Q So in those questions that I have just asked you, did you have in mind that I was referring to the final report date?

A. Now I do, yes.

Q And the answer is still the same?

A. Yes.

Q Now with respect to the question of when the fatty liver

syndrome was first discovered, Doctor, could you tell us by looking over your reports whether that occurred sometime around March 16, 1972?

A. Yes, that was the first occasion that we saw it.

Q Now with respect to the history that, that appears on the report related to that examination, that would be account number 638, I notice the history says, "went into molt in February, eggs got smaller. They came back into good production about six weeks ago. Now going back into molt." What does that mean to you, that information, that history?

A. Well, associated with -- hmmm. I don't know why they should have gone back into molt in February unless there was some change in management, change in ration or they'd been starved or something like that maybe. I, I would feel there would be some precipitating cause.

Q Normally then, it would be your view, Doctor, that normally birds which began producing in late October of 1971 would not be going into molt say, sometime around the middle of January, or February, I mean?

A. Well, I, I feel --

Q The following year?

A. I feel so, with this -- this wouldn't be particularly good from an economic standpoint.

Q In other words, Doctor, could you tell us, based on your

knowledge and experience with respect to this particular field, how long birds usually lay, once they are first placed in production; how many weeks?

A. I'm going to plead ignorance on that particular point because I'm not sure of my facts really.

Q All right. But it is your view that birds that did start producing, say around the latter part of October or the very early part of November, would not be taken out of production and put into molt as early as the middle of February of the following year; is that correct?

A. No. That's right.

Q Now does that have any bearing in your opinion, in the opinions that you expressed here, the fact that these birds were taken out of production and then restarted and then taken out again?

A. Does what have bearing? The fact that --

Q With that history, does that have any bearing on your diagnosis?

A. Well, when you say, "On my diagnosis", you mean do I think this has any bearing on what I found?

Q Yes. I think probably that's what I am asking. Well let me, let me withdraw that question and ask you this question: Is that history consistent with your diagnosis? I have particular reference to the fact that these birds were put into molt at an early point after they first

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Q Yes.

A. -- about the change? Yes. It was suggested on the 21st of March.

Q Is that the first time, as far as you can now recall, that there was any suggestion made by you or your confreres here at the University with respect to the change in feed?

A. I think so. That's probably why we noted it. I suspect that we talked a little bit about fatty liver syndrome though, when we examined the birds previously.

Q But you didn't find it?

A. No.

Q Until March 16; isn't that --

A. 16th, yes; that's right.

Q It was immediately after you found it that this --

A. I was looking at -- I'm sorry, I was looking at the, the second report. That's what confused me, yes.

Q It was immediately after you found this condition in these birds in March of '72 that recommendation was made to change the feed program to 90% of whatever it had been before. Is that right?

A. Yes; that was the suggestion.

Q Did, to your best recollection, did Mr. Libby or anyone else associated with Purina advise you of the type of feed that those birds had been receiving prior to the time that you discovered this fatty liver syndrome?

* * *

A. I do vaguely because I was very busy in the egg room at that time. I was mostly in the egg room.

Q Now there has been some testimony so far from some of the doctors and the experts in the field who have gone out to the farm to see some of the birds that were in the new complex. I think it was Mr. Morrill who indicated the new complex was started around the end of 1969 or first part of 1970, is that correct?

A. Right.

Q So prior to that time, how many buildings and how many flocks did you have?

A. Just the three buildings in Wolcott.

Q And, then you were able to arrange some kind of financing and began construction on the new complex?

A. Right.

Q How many buildings were constructed, and if you recall over how long a period of time were they built?

A. I know we had birds in there in January of 1970. I know we had birds in the first one, and probably the spring and next summer we had the two other ones, I think.

MR. CLEARY. May I have just a moment, your Honor?

THE COURT. Yes.

Q (By Mr. Cleary) When you started the new complex about 1969 or the first part of 1970, what was your main function

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A. That house, April 5th of 1971.

Q So in April of 1971 you put in some brown birds?

A. Right.

Q There were already some white birds in that house?

A. No, that was the first one we put in.

Q Now the chart or the graph we see here marked Plaintiff's "4" for identification is a series of dots connected by a line. Who prepared that chart?

A. I did.

Q From what figures did you prepare it?

A. From the figure? These figures here. (Indicating)

Q And, you are making reference to what is marked Plaintiff's "29" for identification?

A. Right.

Q Would you explain to the jury how you maintain your records on a weekly basis? What kind of a system you were running when you were in the office and not in the egg room to keep count of the number of eggs that the birds were laying?

A. Well, there is a man that takes care of it, and when he come back at night, whenever we run the eggs, he put it down. He takes it on the counter and sets it down and then brings it to the office, and I keep it there.

Q It is just a paper?

A. Yes, on a yellow pad we give him.

Q How often, normally, would you total these little slips the man would bring in?

A. Usually, I take all the slips I have during the week on my desk and put them in each file, building "A," "B" or "C", or homosote, and every Monday night I usually add them up.

Q Every Monday night?

A. Right.

Q On every Monday night would you also add all of the slips from all of the eggs that had been accumulated the previous week?

A. Not always, but it was just my way of keeping track of the eggs, really. At that time, all I wanted was to keep track of the eggs for the end of the year for income tax.

Q You were interested in the total number of eggs the birds produced?

A. Right, and at the end of each batch of birds I was adding up all the eggs I had, and I knew.

Q Do you know much about egg nutrition and feed, yourself, for the birds?

A. No.

Q Your primary job was in the office and there in the egg room?

A. Grading eggs, and in the office.

Q What kind of accounting system was there for the eggs, let's say, back in the fall of 1970 after the birds had gone on to the new feed that Purina was feeding them?

A. What kind of accounting system?

Q Yes, how did you count them?

A. We were counting the eggs in the egg room as we were grading them, because we had no counters in the hen house.

Q So at some point, the counters were actually installed in the hen house?

A. Right.

Q Did they go on the conveyor equipment that is in there?

A. They go on each belt from the small belt onto the big belt.

Q Do you recall approximately when the individual counters were put in?

A. I think some time in 1971, but I am not sure.

Q Do you recall if it was early in the year or toward the end of the year?

A. No, I don't.

Q Now, I would like you to tell the Ladies and Gentlemen of the Jury with respect to that one flock of birds, what your records show for the peak that those birds reached, and approximately when they reached it.

A. Well, on that first row, the brown birds, the peak was around 66.

Q That would be 66 per cent?

A. Sixty-six per cent.

Q And, what does the chart show for that bird as a suggested recommended, or target production peak?

A. The same day would be 83, almost 84.

Q So according to the chart the peak should have been 84 per cent?

A. Right.

Q But the peak was only sixty some per cent?

A. Right.

Q How do you determine at what point the birds peak? What part of your record--and I think it is Plaintiff's "29"--tells you what the percentage of production is, or how do you compute it?

A. Well, at first, right here, I had just brown eggs only, total dozen per week, and then when you asked me some more figures, I took that total dozen per week, or whatever I had per week, and divided it by seven, so I put it in another row here, and this was the average eggs per day, and then with this and the number of chickens I had on here I could tell how much percentage were laying.

Q At some point in time, I asked you, did I, to get the figures together and to prepare production graphs from your figures?

A. Right.

Q And at that point in time, or let's say just prior to the time I actually asked you to go ahead and get these figures together for us, what figures did you have already in your books and on paper?

A. I had the mortality every month. I was putting down the amount of chickens I had left there, and I had per week, or the slip I had on that certain week, the amount of eggs that I had, dozen of eggs per week.

Q So the figure, or column, you have marked "Dozen of eggs per week" might not necessarily each or any week be just seven days worth of eggs?

A. No, no, probably not because I was taking just the slips that I had at that time, and it didn't matter to me if they were this week or next week as long as they were on my sheet that is all I wanted.

Q So the eggs that may have come out of the house last week, they would have been counted and put on a slip, but you might not have marked them in your books until a week or so later?

A. Right.

Q Now with respect to complex "A", what color were these birds we are talking about now, in what we call, I guess, Flock A-1?

A. Right; brown.

Q Did you compute a gain or loss based on a market price for

* * *

in Complex "A"?

A. May 31st they start dropping their first eggs probably twenty weeks.

Q May 31st of what year?

A. 1971.

Q And, do you have any other charts or figures here which also indicate the raw material data, the raw figures that you computed that graph from?

A. Right. May 31st, they were white eggs, total dozen per week, I had 679 dozen.

Q But the birds we are talking about now, can we call them Flock A-2, okay?

A. Yes.

Q That is Plaintiff's "3" for identification?

A. Yes.

Q And, you have reference now to what has been marked as Plaintiff's "29" for identification, and are those the back up figures of egg production for that flock?

A. Right. That is how I used to put it in my book. Those pages are from my book.

Q Tell us again, slowly, how you actually go about computing the number of eggs. How do you go about counting the number of eggs that these chickens produced, let's say, in one week?

A. Well, every day that we do run the barn, the man that

works there always bring me this count. After we finish the white birds, the white eggs, he take all the counts on the counters and put it on the yellow piece of paper, and he raise the count for the next time we are running them, and every night he come to the office and leave it on the side of my desk.

Q When you say, "you run the barn," what do you mean?

A. When we grade eggs, we put the switch on in the egg room and the eggs come directly into the egg room.

Q When the chicken lays an egg out in the house, what happens to the egg?

A. They drop on the belt.

Q On the conveyor belt?

A. Right, and when we need the eggs, we put the switch on a certain row and thewhole barn, if we want to, it is all separate and we bring them by that means into the egg room.

Q So, it is automatically brought by a conveying belt into the egg room?

A. Yes.

Q Where does the counting take place for the eggs?

A. Right before they leave the small belt to go on the big belt that brings them to the egg room.

Q There was a counter installed right out in the chicken house?

A. Right.

Q Is that done every day?

A. No, not always.

Q Do you do it as you need the eggs?

A. Right, or as they are needed; for a flock that would lay a lot we would have to do them every day, even if we don't need the eggs, to put in cartons for the First National, or whatever.

Q But you don't do this necessarily every day?

A. Not at first, no.

Q Now the eggs then, if I understand it correctly, would go down to the conveyor belt when you need them in the egg room. You push a switch and they come in by conveying belt from each row in each house?

A. Right.

Q Can you control each row separately?

A. Yes, we can.

Q So for each row of birds---

A. There is a switch for each row.

Q Now the total would then be taken off the counter?

A. Right, in the barn.

Q And then how is that recorded? Is that put on a piece of paper?

A. Right, by the man that works in the barn.

Q And, that is given to you?

A. Right.

Q And, then where does that figure go from that piece of paper?

A. Well, I usually just leave it there every day. If I have time, I take Barn "A" and put it in File "A", or Barn "B" and put it in each of them. Each of them have a separate file, so I put them there, and every Monday I take those papers and add them all up and that was what I was putting down here. (Indicating)

Q So depending on what Barn, "A," "B," or "C" that you were taking eggs from that previous week, that would determine what slips you had on your desk?

A. Right.

Q Now in some weeks would you have less eggs from one barn and more eggs in another barn?

A. Yes, because some times on Monday, if you need brown eggs or white eggs, you leave the brown eggs in there and just do them on Tuesday or something like that, or if there aren't enough eggs to keep them busy, lots of times we let the eggs stay in the barn and next day there are more eggs and the whob egg room is busy with them, or if we need them.

Q What would be some of the factors that would cause you to leave, let's say, the white eggs out in the barn with the chickens, underneath on the conveying belt, and bring in

brown eggs?

A. If we need the brown eggs, we do the brown.

Q What determines whether you need the brown eggs or not?

A. By the orders we get from the stores. I mean, like we got just two days, Monday and Tuesday, and on Wednesday we do have to be ready to load the truck for Wednesday night and then the same, the truck has got to leave every Monday and Tuesday, and every Thursday and Friday.

Q It is kind of a scheduling thing?

A. Right, but we have to be ready to have all the orders go out. If we are short of time at a certain point, short of time to do the orders for the trucks, we overlook the white eggs or brown eggs, which one we have the most. If we need more brown eggs, we do just the brown barn.

Q So you call in just brown eggs?

A. Right.

Q So in any given week on a brown egg chart, you might show, for example, an awful lot of brown eggs that Monday night when you marked up your slips?

A. Right. One week you graded the eggs for that barn just like three or four times that week, but the rest of the eggs go in the next week, naturally, so next week instead of having seven days eggs, you have got ten days eggs or something like that.

Q So your weekly figure might have as little as three or four

days and might have as many as ten or eleven days?

A. By the way I was putting it in my book, yes.

Q With the A-2 Flock, can you tell us at what date they peaked according to your records, and what the percentage of production was at that time?

A. That would be August 29th and it was 75 or 76 by this chart. It is about 75 or six.

Q Per cent?

A. Per cent.

Q What does the breeder show the expected percentage of peak at that point?

A. See, there is two line in here. Some cards have just one line, but it would be--suppose I take it in the middle of this--it would be 86-85.

Q And, generally, what happened to production after that point, after the low peak of 60 per cent?

A. They tapered down slowly.

Q On what date was there a disposition of these birds?

A. These A-2 were molted on May 22nd.

Q Of what year?

A. 1972.

Q So that when you say the birds were molted, what do you mean?

A. Well, that part my husband does. He takes the water away and feed away and somehow return it slowly. I don't know.

* * *

MR. CLEARY. Your Honor, based on our conversation at the bench with respect to the exhibits, I think we will suspend with Mrs. LeRiche at this time and call Mr. LeRiche to the stand.

THE COURT. All right.

LEOPOLD LERICHE, Sworn

DIRECT EXAMINATION

Q (By Mr. Cleary) Would you give us your full name for the record, please.

A. Leopold LeRiche.

Q Where were you born, sir?

A. I was born in Actonville, Province of Quebec, in Canada.

Q When did you come down to the United States?

A. I think it was 1951.

Q And what was the reason you came down at that time?

A. My father bought a farm here in the State of Vermont.

Q Were you married or single then?

A. I was married.

Q What is the extent of your education?

A. I went to third grade in school.

Q Where was that?

A. In Canada; in Actonville.

Q About what time did you start into the table egg chicken business?

A. About seven years ago, I think.

Q Where was that? Where was your first operation?

A. In Wolcott.

Q How many birds did you have then, if you recall?

A. At the very beginning we went into the meat business. We were in the broiler business at that time at the very beginning. We had about three or four hundred birds, I guess.

Q And then from there, you went to the laying birds?

A. Quite a few years. I stay in the meat business, the broiler business, and then later on we went into the egg business, yes.

Q When you went into the egg business, what kind of facilities did you have?

A. I borrowed my father's barn which he wasn't using at the time.

Q How many birds were in there?

A. We started with three to four hundred, and eventually we increased to capacity.

Q Which was about what?

A. About 5,000 capacity of the barn.

Q Do you recall approximately when it was that you began construction on a new building for more birds?

A. A new building?

Q Yes, and I am speaking now of a time previous to the

construction of the new complex.

A. Yes. I would think probably '55. 1955, I think.

Q What building did you construct then, and where was it built?

A. Well, can I answer this question this way? I bought a house, and where we bought the house there was a piece of land vacant, so there was room for a couple houses there. We built one there when we bought the house.

Q When you say "room for a couple houses," you mean chicken houses?

A. Yes.

Q Who actually built the chicken houses?

A. Me and my wife.

Q How large a facility were they?

A. I think the first building is 136 by 36.

Q When you say you and your wife built them, do you mean that you paid to have someone build them?

A. No, we build them ourselves.

Q What are they made out of?

A. Made out of plywood and matched board.

Q A regular frame construction?

A. Yes.

Q And, how many birds were housed in there at that time in the late Fifties?

A. That house, I think if I recall, hold about 15,000 birds.

Q Now, do you recall what feed you were feeding back in the late Fifties or the early Sixties when you had the other building?

A. At the beginning we were on contract with other feed companies like Eastern States.

Q So you were raising chickens for someone else?

A. On contract, yes. We didn't have any money to finance the house, and besides raise the chickens. We couldn't swing that.

Q So they actually put the birds in?

A. Yes. We take care of it for them.

Q And, you were paid so much?

A. A week, yes.

Q Did there come a time in the spring of 1970 when some of the people from Ralston Purina in St. Louis, or some of these other couriers came to see you?

A. Yes.

Q Could you tell the Court and Jury, if you recall, who they were?

A. One of them was Mr. Purnier, and the other man, I don't remember his name.

Q Were there any doctors, or nutritionists, in the group that came to talk with you?

A. Yes, there was one nutritionist of Ralston Purina.

Q Subsequent to that meeting in 1970, did you receive some

correspondence from the Ralston Purina Company about that meeting?

A. I have received a letter, I think.

Q Yes, did you receive a letter?

A. Yes.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibit "64" for identification is a letter dated August 5, 1970.

Q (By Mr. Cleary) I ask you to look at Plaintiff's "64" for identification, Mr. LeRiche, and ask you to tell us if that is the letter you received from Ralston Purina Company? (Handed to the witness)

A. It is, sir.

Q And, do you recall, or does that letter refresh your recollection as to who the individuals were that were actually there at that meeting with you, and what was the date of the meeting?

A. I don't exactly remember the date of the meeting. The letter is dated here, August 5th, and that must have been about ten days previous to that.

Q That the meeting was held?

A. Yes.

MR. CLEARY. Your Honor, we offer Plaintiff's "64" in connection with Mr. LeRiche's testimony at this time solely for the purpose of refreshment of his recollection so he can tell from the exhibit who the people were

that were present at that meeting.

MR. DIVOLL. No objection.

THE COURT. Sixty-four is admitted.

(Plaintiff's Exhibit "64" was received in evidence.)

Q (By Mr. Cleary) Now with respect to that letter, Mr. LeRiche, tell us who the letter indicates the individuals were who were at that meeting and what the date of the meeting was, according to the letter? (Handed to the witness)

A. Well, at that meeting there was Mr. Gene Counard, Mr. Arthur Gauthier and Mr. McLeod, and I think this is it.

Q Can you tell us who signed that letter?

A. I read very little English; I don't read.

Q It says here, "Bill Ragland, Ph.D., Nutritionist". Do you know him?

A. Yes, now the name comes to me. Mr. Ragland, yes.

Q Prior to this meeting in 1970, and am I correct in assuming that the letter indicates that the meeting took place on Thursday, July 30th?

A. Yes.

Q Do you see July 30th?

A. Right.

Q Prior to that meeting of July 30th of 1970, were you feeding Ralston Purina feed to your flocks?

A. Yes, I was.

Q To all of your flocks?

A. Yes.

Q There were no other feed manufacturers feeding your flocks in 1970? Let me rephrase that. Were there any birds that were eating Pease grain or any other feeds?

A. I think it is possible maybe I was beginning to feed Pease grain at that time, or somewhere in there, I guess.

Q So the jury will have a frame of reference, when was that first house in the new complex, the "A" building that we refer to, when was that constructed, when was it finished?

A. I think in the fall of 1970, I think it was.

Q Some time in the latter part of 1970?

A. I think so, yes.

Q And, at the time that the Purina people came to talk to you in July of 1970, did you have any buildings up at that time?

A. Yes, I had one, I think.

Q That would have been the "A" building?

A. Yes. Mr. Cleary, maybe it was 1969. I don't have all these things. I memorize everything, and I try to memorize too many things, you might say, at some time.

Q Would your wife have a better idea of the figures?

A. Of course. She does all the bookkeeping, but I think it was 1969 or '70 we started building the complex.

Q And, it was after you started building the complex that the Purina people came and talked to you?

A. Yes.

Q Tell us, if you will, what the general content of the conversation was in July of 1970 from the Purina people, and if you can identify the people who were there, and what each of them said, if you can recall.

A. Well, they came in and at that time I was feeding another type of feed.

Q You say it was still Purina feed?

A. Yes, and they said, "Well, Mr. LeRiche, I think you ought to take our advice over here." This was discussed with Arthur a couple times before this new type of feed, the new program they had, and this is why these people came in and saying that I was going to save a lot of money by feeding this particular type of feed.

Q When you say "Arthur," you mean Mr. Gauthier?

A. Yes.

Q And, he was a salesman for Ralston Purina Company?

A. He was, yes.

Q So there was some discussion with the area salesman for Purina prior to the group coming to see you?

A. There was, yes.

Q And, they were talking about a new type of feed?

A. Yes.

* * *

A. No.

Q Did they indicate to you at that time whether you could expect any different production results from your birds?

A. I would get just as good production with this feed than their other feed.

Q Than their other feed?

A. Yes, I would save a lot of money.

Q How was your production on the older feed, at this time?

A. I am not too sure. I think it was not too good. At that time, it wasn't too good.

Q Do you recall approximately when you started on this Life Cycle Feed?

A. Repeat the question again.

Q Do you recall approximately when you started feeding, or the feed was delivered by Purina?

A. After the meeting, some time, I switched. I start to begin to feed this feed.

Q Would it have been in 1970 or in 1971?

A. I think it was 1970, latter part of '70.

Q And, do you recall which flock you started feeding it to first?

A. I think it is the "A" building; the "A" complex.

Q How do you store your feed at the "A" building, or did you then?

A. I have two big feed bins outside the building. They

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1971.

Q And, at that time did the birds in that building go on---

A. The same feed.

Q Same feed?

A. Yes.

Q Where were the birds raised that went into the buildings "A," "B," and "C"?

A. Raised on my home farm in Wolcott.

Q When would the birds that went into the houses in 1971, when would they have been raised, what year?

A. They would have been raised in 1970. It takes five month to mature the birds.

Q And, on what feed were they feeding then?

A. They were feeding Purina.

Q Was it the L.C. Program?

A. I think so.

Q This would be at the end of 1970?

A. Yes.

Q So the baby chicks that went into the new complexes in 1970, the end of '70 and in '71 were started on the Purina new program feed?

A. I think so.

Q Do you know whether or not Purina ever changed the feed on you from the Life Cycle Feed? Did Mr. Gauthier ever indicate to you that he had changed it?

A. Well, when you raise baby chicks they come in with a program, you see.

Q Who comes in with the program?

A. Purina comes in with the program and they put the chicks on starter and later on they change to another type of feed, and as they get older, another type of feed. Until they are ready to lay, there are two or three kinds of feed that you would feed on a growing bird.

Q When the baby chicks are growing up?

A. Yes. So they could have changed the feed without even asking me because I wouldn't know anything about it, you see.

Q That was part of the Life Cycle Feed?

A. Yes, part of growing the birds.

Q Did you ever receive anything from the Ralston Purina people, booklets or anything telling you what the Life Cycle Feed was?

A. They did give me a small book one time, I guess; I think.

Q And, that would have described what you are talking about? Do you know what was in the book?

A. Yes, that would describe that, yes.

Q Now in 1971 then the birds in the "A," "B," and "C" complex had already been raised on the Life Cycle baby feed and then put into the houses?

A. I don't think they were called "Life Cycle". You just

call this another type of feed, as far as I am concerned. You know, Life Cycle to me doesn't mean nothing.

Q Did all the baby chicks receive the same feed?

A. Yes.

Q And, is that also true of the baby chicks we have talked about previously that started laying eggs in 1972?

A. They have to, yes.

Q And, they all received the same feed?

A. Yes.

Q Now at the time that the baby chicks went into the cages at the end of 1970 and the beginning of 1971, were you there?

A. Oh, yes.

Q Were you in-and-out of the houses frequently?

A. Every day.

Q What, actually, is your function in your job at the chicken complex, Mr. LeRiche?

A. Well, in the managing I make sure I go around my buildings, make sure everything is in good shape and also every night I do that twice a day and many times during the day.

Q And, do you inspect the young and the baby flocks as well?

A. Especially, yes.

Q At the time that these birds went into the laying cages, the end of 1970, what did they look like?

A. I would say they looked very good.

Q What do you mean?

A. They had good shiny feathers and nice red combs. They looked very, very good.

Q Were they fat?

A. I don't think you would call them fat, but they were good plump birds, you might call them.

Q How about the birds that went into the cages in 1971 in "A," "B," and "C"?

A. They were all the same thing, all beautiful birds.

Q The same as you have just described them?

A. Yes.

Q How about the birds that went into the Maine building, the Dostie farm?

A. The same thing.

Q How about all the rest of the birds you saw going into "A," "B," and "C" in 1972?

A. Yes, they were all grown under the same management and all the same type of birds, same thing; maybe not the same hatchery, they could have been brown or whites, but they were all looking very good.

Q All on the same feed?

A. Yes.

Q And, all looked the same when they were housed?

A. Yes, the men, many, many times, mentioned it to me the

birds looked very good.

Q How about in 1971, in the end of '70 when these birds started to produce, what was their production rate like, if you recall?

A. Well, the production, I kept complaining to Arthur, Mr. Gauthier, a good many times saying, "I don't think the birds were doing as good as they should".

Q When would this have been?

A. This has been going on for quite some time in 1970 and 1971.

Q Did you ever say anything to him about feed, or that you thought some other feed should be fed the birds?

A. I didn't say some other feed could be fed, but I kept saying"what is the matter with their grain, are we ever going to get eggs out of these birds"? I mentioned it several, several times. I heard him one time call from my office into St. Johnsbury saying to the boys I was complaining about the feed.

Q Now was anything done that you know of by the Ralston Purina Company in 1972 when you would complain about low production?

A. Well, nothing was done, no, but they say, "Well, maybe don't forget Leopold, it was very hot last week, or two weeks ago; maybe this affect your production," or maybe they say when it happens to be in the winter time, "It is

* * *

Perhaps I put up another shed afterwards, the generator house and so on, and so we didn't really put all the figures together. Jeannine take the figures and she runs the egg room, and I am trying to do some selling besides running the crew and pounding the nails, you might say, and we didn't keep track of the production as maybe as close as we should have.

Q But, you knew the production was low?

A. We knew the production was low. It was something that just didn't appeal there.

Q How did the birds look in 1971 after they started laying eggs?

A. Pardon me?

Q How did the birds look in 1971 after they started laying the eggs?

A. Well, after awhile they began to lay their complete pail, and they didn't look as sharp as they should have.

Q Not as shiny?

A. Not as shiny as they should have. This fatty bird is something I never had before, Mr. Cleary. This is something brand new to me, I never see such thing.

Q How about in 1972, was it the same thing then?

A. Yes.

Q And, the production was low in 1972 as well?

A. Yes, it was.

* * *

A. I am talking about 1970.

Q In the latter part of '70?

A. Yes.

Q In that tail end of 1970 when you went on to the L.C. Program, and in 1971 you indicated, I think, that the birds went into their cages?

A. Yes.

Q You said, "Looking very well; they were shiny, had shiny feathers," and red something or other?

A. Red comb.

Q And, looked a little plump?

A. Yes.

Q Before that time when you were on the other feed, did the birds have shiny feathers, or were they--or did they look the same going into their cages before the end of 1970?

A. Yes, they did.

Q And, do you recall how far back?

A. No, I don't.

Q Would it have been prior to the time that you went on to this--let me ask you this. Do you know exactly when the L.C. Feed was started?

A. When I saw L.C. Feed, this is something that I wasn't even too much aware. It is a name.

Q The Life Cycle Feed?

A. They used, but it is a new brand of feed they were

using, and what was the question again, Mr. Cleary?

(The reporter read the pending question.)

A. It was started the latter part of 1970.

Q (By Mr. Cleary) Did you have a fat bird problem with your laying birds? I am talking about the laying birds, not the baby birds.

A. Yes.

Q Before you went on to this new feed?

A. Yes, I did.

Q When?

A. Well, I think the birds looked, you know, I always had a low production for a long time on these.

Q As of what date?

A. First of all, If I recall, I had a meeting way back with Mr. Leonard and this is when the problem was started.

Q Mr. Leonard?

A. Mr. Leonard, yes.

Q Who is he?

A. He works for Ralston Purina Company.

Q About when was that?

A. This was about a couple years, about '69, I guess it was.

Q What was the meeting about?

A. I started complaining about low production then, but it is something we weren't aware of the problem, see, and

* * *

A. The end of 1970 and beginning of '71?

Q Yes., What other houses did you have with birds in them?

A. Well, I had birds in Wolcott in my home farm.

Q They were laying birds?

A. Yes, they were laying birds at the homosote building, you might call it.

Q At the homosote building?

A. Yes.

Q When did you start the birds in Maine, do you recall?

A. The Maine birds was started a couple years ago, about 2-1/2 years ago.

Q 1971 or so?

A. Yes.

Q Without reference to years, did you have any problem with fat birds and low production prior to the time that you went on to the new Purina feed?

A. Well, to answer you, these birds I am moving into Maine now?

Q No, without reference to any individual flocks?

A. Okay.

Q Prior to the time that the Ralston Purina Company started feeding the birds this different type of feed, did you have any problems with fat birds and with low production?

A. I can't say they were fat, but we had problems. We always had low production.

Q But they weren't fat?

A. To go back that far and say we were trying to find, we didn't know what we were looking for.

Q Do you know, yourself, from your own knowledge, or own observation whether the birds were fat prior to the starting of this new program? That is what I am asking.

A. Well, I don't they they could have been. They could have been on the heavy side, or they could have been fat. All I know is, we didn't get the egg production. You want me to tell the truth?

Q Absolutely.

A. You know, this is it as far as going back and saying these birds were very fat, and five years from now, you know, you don't remember all this. I see hundreds and hundreds of thousands of birds, and how can I say five years ago I had fat birds? I think the birds were simply they weren't in a position where they were giving us the results we were looking for.

Q This was prior to starting the new feed?

A. Yes.

Q Is it fair to say that after the starting of the new feed that that is the first time you noticed that the birds were fat and not producing?

A. Right. This is where this whole thing come about then.

Q This was after the L.C.?

A. After the L.C. Feed got started and we went on to this, yes.

Q So to the best of your knowledge, prior to the L.C. Feed you don't know whether these birds were fat?

A. No, I don't.

Q But after the L.C. Feed, you had the opportunity to observe that they were fat and the production was low?

A. Right.

Q Is that true of all the flocks that were in the "A," "B," and "C" buildings and in Maine?

A. Yes, they were all the same feed. They were all the same thing.

Q This is after the L.C. Feed?

A. After the new feed program was started, the production seemed to get very, very low. The production, some times, seems to me was ridiculous low.

MR. CLEARY. I think that is all I have at this time.

CROSS EXAMINATION

Q (By Mr. Divoll) I guess, Mr. LeRiche, we agree up to the time the chickens went into the houses, Purina feed had been doing a good job?

A. Well, I don't know. I guess the Purina feed, as far as growing the pullets, up to that point, I never complained about it.

Q Now when did you say that you first started to use laying chickens?

A. Raise chickens?

Q To produce eggs?

A. About seven years ago; six or seven, maybe eight years ago.

Q And, you started feeding Purina at that time?

A. Yes.

Q You have fed Purina ever since until, I think, the latter part of October of 1972?

A. Yes, that's correct.

Q And when you started eight years ago, I think you had just one house you had built on the farm?

A. Yes.

Q Tell us what you have now.

A. Well, now I have got my home farm.

Q What is on the home farm?

A. There is two building there.

Q Chicken buildings?

A. Yes.

Q Your house is there?

A. Yes.

Q When did you buy that?

A. When did I buy the buildings?

Q Right.

* * *

A. No, there is none, sir.

Q And, you think that you installed cages first in the homosote building two or three years prior to building the complex?

A. Two or three years, I would think, yes.

Q Now I think you said that ever since you started feeding this L.C. Feed, L.C. Program which you started in 1970, that the birds had been fat?

A. Well, we noticed the production had been low, sir.

Q Well, I think you testified that the birds were fat?

A. Well now, we know that the birds there was something wrong, eventually, but at that time all we noticed was that the production was low.

Q Then you didn't examine any birds in 1970?

A. No.

Q Did you examine any birds in 1971?

A. No.

Q Did you, over this period of time, ever send any birds to the University of Vermont?

A. By occasion, yes.

Q Did you receive correspondence, or reports, back from the University of Vermont?

A. I have, yes, sir.

Q Are they available?

A. You have got them.

Q Well, I think we have them after August of 1972, but from 1970 and 1971, we don't have. Did you send birds during those years?

A. I am sure periodically that we have send birds into them, yes.

Q As you sent birds in, you received reports?

A. Yes.

Q Now on any of those reports was there ever mentioned anything about fat birds?

A. Not as I recall, sir.

Q You said that you had Mr. Morrill--is it Doctor Morrill?

A. I don't think so.

Q He has something to do with the Poultry Department at the University of Vermont?

A. Not Mr. Morrill.

Q Mr. Morrill came to the farm and opened up some birds?

A. Doctor Murray opened up some birds for us, yes.

Q And, do you know when that was?

A. Well, I don't have the date, sir. Mr. Morrill took the birds into the university and Doctor Murray opened up the birds.

Q And that was, if I remember, in August of 1972?

A. Yes.

Q And, that is the first time that you had received any reports about fat birds?

* * *

Let's see here. It is in July, not in the fall. The meeting took place in July, but we went on to this new feed later on in the summer, yes.

Q That was in 1970?

A. Yes.

Q Now, do you remember on the laying ration the percentage of protein that is recommended in the Life Cycle?

A. I think it is recommended at fourteen.

Q And, you didn't receive fourteen per cent, did you?

A. I think I have got many, many tags that says fourteen per cent, yes.

Q Isn't it a fact, Mr. LeRiche, that you would not accept the fourteen per cent and that it was special ordered, and you were continually furnished fifteen per cent ration?

A. No, it is not a fact.

Q It is not a fact?

A. No.

Q Now the Dostie flock that was in Maine, what percentage of protein did you require for your Dostie flock?

A. The discussion was taking place and Ralston Purina was going to put them on the different protein ration, and this was being discussed with the company and me, and they went on to an eighteen per cent.

Q You demanded an eighteen per cent, didn't you?

A. I don't think I demanded it. I think we just discussed

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it.

Q The Dostie flock was fed continuously eighteen per cent feed?

A. I believe that they have, sir.

Q And, your homosote flock that Mr. Morrill testified was on eighteen per cent feed?

A. Yes, they are, sir.

Q You didn't get good production, you claim, from the Dostie flock?

A. Not as good as I should, no.

Q And, the Dostie flock also had fat birds?

A. The Dostie flock? Yes, fat birds.

Q But they were fed eighteen per cent?

A. Yes.

Q Did you ever make any formal complaint about fat birds to anybody from the Ralston Purina Company except Mr. Gauthier?

A. I never made any complaint about fat birds. The only complaint that I made was low production.

Q And, over this eight-year period that you complained of low production on Purina feed, you still purchased the Purina feed?

A. Well, first of all, it doesn't quite go back eight years. We only had one flock, I think, in the Eldridge Farm, and Mr. Morrill was feeding the homosote building,

A. Yes. I remember this, yes.

Q It was about that time you noticed the problem?

A. No, the problem came on later, a little later. I would say the problem came on the low production figures begin to show in the Seventies, probably in August some time.

Q And, they continued on until when?

A. Until we come to this discussion with the Purina Company and say, "What is going on?"

Q Now, how many flocks, and I am talking about laying flocks, not the baby chicks, how many laying flocks was Purina feeding in, let's say, before 1970 when you built the new buildings? How many laying flocks was Purina feeding?

A. I think only one.

Q One flock?

A. Yes.

Q Where was that flock at that time?

A. That flock was at Mr. Eldridge's farm, if I recall correctly. Now you have to go back quite some time, and all these flocks, and all these years, it is not easy, because I don't write English, Mr. Cleary, and I don't read English too well either, so I memorize everything I do, you might say.

Q Okay. Now prior to 1970 when the new complex was going up, there was one flock that was being fed, a bunch of laying birds were being fed Purina?

A. Yes.

Q Then after the new complex started and you put all of the laying chickens in, who was feeding the laying birds?

A. Purina.

Q Now let's go back again to the flock that was being fed Purina in the laying birds before the new complex. That was the only one?

A. Yes.

Q You had other flocks that were laying birds?

A. Yes.

Q Who was feeding those?

A. Mr. Morrill.

Q How were those birds doing?

A. Doing very well, very well.

Q How was the Purina flock doing?

A. Not doing too good.

Q Did you complain to Purina then?

A. I have.

Q Did they do anything for you at that time?

A. No.

Q Whose feed raised all of the baby chicks?

A. Purina.

Q Has that always been true?

A. Yes.

Q In the past?

A. Yes.

Q So that the birds that went into the cages in 1970, the end of 1970 and throughout 1971 and 1972, were raised on Purina?

A. Yes.

Q And, fed Purina as laying hens?

A. Yes.

Q And, you have this homosote building?

A. Yes.

Q That is the one you and your wife built?

A. Yes.

Q And, those were the birds that were being fed Pease grain?

A. Yes.

Q Now you said that you noticed low production and that you talked to the people at Purina about this?

A. Yes.

Q When?

A. Well, the first meeting took place---

Q Not just meetings. When did you talk with them or tell them about it?

A. This whole thing come to a real problem when Mr. Morrill, one day I call him up, he come down, and he open up some birds in front of me, and he says, "My goodness, Leopold, I know why your birds don't produce. They are too fat".

Q Had you opened up any birds before that, Mr. LeRiche?

A. I do not involve too much. Occasionally, I might open a bird that I want to be curious about, but normally, I send my birds into the laboratory.

Q Now in 1971, you had poor production in "A," "B," and "C"?

A. Yes.

Q You were still feeding Pease grain in the homosote building?

A. Yes, I was, sir.

Q How were those chickens doing?

A. They were good, doing very well.

Q And, in 1972, you continued to have bad production?

A. Yes.

Q In "A," "B," and "C"?

A. Yes.

Q Were you complaining more in 1971 or 1972?

A. I have talked to Purina, to Mr. Gauthier, a good many times about the feed; I didn't think the feed was doing the job, and I keep, you might say in good English, have this long discussion many, many times with Mr. Gauthier.

Q Over a long period of time?

A. For quite some time after I put up the complex up there.

Q After the new complex---

A. Was built, yes.

Q When was it that Purina first started doing something,

* * *

A. Some time they were buying the birds and some time I was buying them myself. I had enough money so I can buy the birds myself.

Q And, who was--would they furnish the feed or would you pay for that as you used it?

A. They financed the feed on these birds, on the pullets.

Q On the baby birds?

A. On the baby birds, yes.

Q When they went into laying houses and became egg laying chickens, how was the feed paid for then?

A. Then they put us on the repayment schedule which involved about, I think, eleven months, and in eleven months time we paid that back.

Q What happens to your pay back if your egg production isn't what it is supposed to be?

A. That is a good question. If you don't get the eggs, where are you going to get the money to pay for the feed, and it was bad; it was getting bad; it was hard.

Q Did you have a profit in 1971?

A. No.

Q Did you have a profit in 1972?

A. No.

Q Now, was it necessary for you to go and buy eggs in the market?

A. Yes, I did, sir.

Q For what reason did you have to buy eggs?

A. Because, well my birds were producing very poorly, so poorly that I had to buy quite a few eggs in order to supply my markets.

Q These were commitments that you had?

A. Yes, I supply eggs to all the chains here in Vermont-- Grand Union, First National, Super Duper, A&P, IGA; not all the IGA though.

Q Was this a problem also in 1971?

A. Yes.

Q You had to buy eggs in 1971?

A. Yes.

Q Would you know yourself approximately how much you had to spend on eggs in 1971?

A. I wouldn't remember that, sir.

Q Would your wife have those figures?

A. Yes, she would.

Q Now, who were you buying eggs from in 1971?

A. I was buying from Purina.

Q So Purina was selling you the eggs?

A. Yes.

Q When did you first go to Purina and ask about getting some eggs from some one? How did that come about?

A. Well, you might say that for the little bit of English that I can talk, I must be able to do some selling at a

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about when the first time you actually complained to Ralston Purina Company. When do you ~~ce~~claim that it was now?

A. Well, the first time I really complained to them is when Mr. Morrill and me discover these fat birds.

Q That was in August of 1972?

A. Ya, it was.

Q So that all of 1971 and all of 1972, the first half, and all of 1970---

A. See, you confuse yourself, see?

Q I confuse myself, no question about that. You went on the Life Cycle with birds in the fall of 1970 after this meeting in July?

A. Ya, I think we went on to this in August or September, I think it was.

Q So the balance of 1970, about three months, and for the months in 1971, and for six plus months in 1972 you had experienced these problems but you had never made a complaint?

A. Well, like I said, no, we never complained. We never complained to Ralston Purina about the fat birds because---

Q Now the homosote building is different construction than your complex, is it not?

A. Yes, it is.

Q The homosote building is wood? Is it a wooden building?

A. Yes.

Q And, what is the construction of your complex?

A. It is also wood. The frame is all lumber.

Q The frame is wood?

A. Yes.

Q What does it have on the outside?

A. Galvanized steel.

Q What is it lined with inside?

A. Matched boards. You mean, I am sorry, you mean at homosote or complex?

Q I am speaking of the complex.

A. Inside it is lined with steel also.

Q Lined with steel?

A. Yes.

Q What is the inside of the homosote building lined with?

A. Lined with matched board.

Q So at some point on the inside anyway, you have the difference between wood and steel?

A. Yes, there would be that difference, yes.

Q The birds at the homosote building are cared for by a different, I will say different caretaker. I don't know what they do call a person that takes care of chickens, but by a different caretaker?

A. Yes.

Q Than the ones at the complex?

A. Yes.

Q You don't intend to maintain here that it was necessary for you to buy all the eggs that you purchased because of the poor production that you were complaining of, do you?

A. No, sir.

Q Actually, in your sales over the last three years, 1970, '71 and '72, you only produced approximately 1/3 of the eggs that you sold, isn't that right?

A. I do not have the figure at all, sir. I don't know.

Q Do you know whether or not in 1971 that you bought 2,534,092 dozen eggs?

A. I do not know, sir, I would have to go back to Jeannine for the figures.

Q Would you think that was approximately correct?

A. Well, I know that the production was low, and we had to buy quite a few more eggs on account of that, naturally.

Q In 1972, you actually purchased 2,249,150 dozen, didn't you?

A. I don't know, sir, I don't know. I wouldn't have that. I can't remember that.

Q There was some discussion between you and Mr. Cleary about the financial arrangement with Purina. As I understand it, in order for you to purchase the chicks and to purchase the feed, you entered into this security agreement with Purina?

* * *

The Dostie operation, this was originally a dairy operation?

A. Yes, it was.

Q And, he converted from the dairy barns into a poultry house?

A. Right, he did.

Q Was your flock that went there, the first flock in the poultry house?

A. Yes, we were.

Q Your flock, if I remember correctly, went there in October of 1971?

A. Right around this time, yes.

Q Now I think you stated that when he converted to the poultry operation, that he drilled a well?

A. Yes, he did. Well, at least, that is what I was told.

Q Thenin July, or some time in 1972, he drilled another well?

A. I don't think so.

Q You don't think so?

A. I think both well, if I am not mistaken, I think both were drilled at the same time, the same year.

Q But you are not sure?

A. I am not sure, sir.

Q Well, if the evidence should show they drilled a well in 1972, it wouldn't be one that you knew about, I take it?

A. Well, I know I asked. There was a discussion about

the water, you know, and he assured me many times there had never been a water shortage, that he had ample water, and he also put up a generator, a generator for electricity in case the electricity go out so he can make sure he got water all the time.

Q Now you have been in the egg business five or six or seven or eight years?

A. Six or seven.

Q Now the egg business, is it not a sick-like business, it has its ups-and-downs?

A. It sure has.

Q And, you were in it, as you have testified, in 1971 and 1972. Isn't it true that those particular years were the low years for the poultry producers?

A. I think it was, sir.

Q I am not sure anybody has described to us the cages that were in the new complex. Would you briefly tell us what they were like?

A. With your permission, I brought a picture.

Q Perfectly all right.

MR. LERICHE. (To Mr. Cleary) Would you show this to him, Mr. Cleary?

Q (By Mr. Divoll) I show you a book that Mr. Cleary gave me. Are the pictures of the cages in here? (Handed to the witness.)

* * *

(Defendant's Exhibit "E" was received in evidence.)

Q (By Mr. Divoll) Now, Mr. LeRiche, I show you the picture we are speaking about on Page 5. (Handed to the witness)

A. Yes.

Q And, these cages are in long rows?

A. Yes.

Q How many birds to a cage?

A. Four birds, and three birds.

Q It varies?

A. It varies.

Q Are these cages similar in the homosote building?

A. Yes.

Q And, how many birds are kept in the cages there?

A. Three.

Q Do you ever vary these?

A. No. The reason for that is the white birds takes less room than the red birds. The red birds are heavier, so you put three, and the white birds are lighter and you put four.

Q I think you have testified that following the meeting in August of 1970, that you were persuaded to go on to the L.C. Program, what they call the Life Cycle Program?

A. After this meeting with Mr. Counard.

Q And, you started feeding on the Life Cycle Program with

that flock in September of 1970?

A. Somewheres in there, yes, sir.

Q And, that is when your first delivery of Life Cycle grain was made?

MR. CLEARY. If you know.

A. I am not just sure what that date would be, Mr. Divoll.

Q (By Mr. Divoll) But it was in the fall of 1970?

A. Yes, I would think so.

MR. DIVOLL. That is all.

REDIRECT EXAMINATION

Q (By Mr. Cleary) Mr. LeRiche, I show you what has been marked as Plaintiff's "66" for identification and ask if you will identify that for the Court and Jury please? (Handed to the witness)

A. This is the letter sent to all my accounts, or most of my accounts, saying they not pay. I can't read that well. I can read it probably, but---

Q This is the copy of the letter that was sent?

A. I am pretty sure it was.

Q Where did you first receive a copy of it?

A. At my office.

Q Who sent it to you, do you know?

A. Mr. Divoll.

MR. CLEARY. We offer Plaintiff's "66" in connection with Mr. LeRiche's testimony, your Honor.

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heterophils bacteria would invade and infiltrate the liver. Without doing bacteriology, I could not say what the specific bacteria was in those particular tissues, but there was definite lesions, microscopic lesions, indicative of infectious disease.

Q At the time you visited the Hardwick complex, you went into Complex "B"?

A. That is correct.

Q And, did you go into Complex "A" and "C"?

A. No, I did not.

Q Did you attempt to?

A. I asked if I could see the birds, and the buildings in the inside of the buildings of the house on the end, which would have been to my right. I assume that is Complex "C", and I was not allowed to go in. Mr. LeRiche told me that wasn't any of my business, and I should be concerned with this house "B", or at least the house I had just come from.

Q Now, you have been in court so far throughout this trial, have you not?

A. Yes, I have.

Q And, are you aware that the accession reports and posting was done on birds in Complex "C", I think around the first of to the 15th of November of 1972?

A. I have some recollection that there were some of those

birds examined by other people. I did not.

Q And, that those reports and the birds were submitted for those reports because of low production in Complex "C"?

A. That is my understanding.

Q And, you were still not allowed to go into Complex "C"?

A. No, I was not.

Q For what purpose were you there at the Hardwick plant?

A. Well, I had been invited to the area to visit commercial hen operations. The real primary objective was to visit with Mr. LeRiche in connection with his low egg production problem that he was having.

Q And, presumably, he was also having one in Complex "C"?

A. Well, I don't know that he was having one in Complex "C". I was just taken to one building and the problem was described in that building.

Q Now, you posted how many birds there at that building?

A. I posted four birds.

Q Who selected the birds?

A. Mr. LeRiche picked them out for me.

Q Now, much has been said that you found fat in the abdomen and would you tell us what fat you found, and the significance that it meant to you?

A. Well, I found a mass of fat in the posterior abdomen, the back part of the bird's body. This is a site of adipose tissue. In other words, the bird has a normal fat

depot in that particular part of its body which is usually a rather heavy--and these terms are relative, really kind of relative--but I just have to say it, I guess, in that way. These are usually rather heavy accumulations of fat. There is also fat that normally occurs on the surface of the gizzard, for instance. There will be a normal accumulation of fat, although it should not be a great amount, on the heart itself. Of these birds that I examined, they did have an accumulation of fat in the fat depots in the posterior abdomen and over the gizzard. Now, I had not posted a Warren Sex-Sal bird to that point, but I had posted a great number of what we call heavy breeder birds, or broiler breeder birds. These birds, at least as I understand the heavy breeders, represent, well, the largest bird, and the Leghorn type birds represent the small type bird, and then this Warren bird represents something between these two, shall we say, extremes, or the limits, and it was my feeling that this was not an exorbitant amount, or quantity of fat deposition as these sites. Now, I did not measure the thickness of this fat pad, and I did not weigh these birds. This was a gross examination of the specimens that were presented to me.

Q I think you were questioned about the causes of fat deposits. Are there other causes than were mentioned yesterday?

A. Well, yes, there could be the possibility of birds in

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Q And, I suppose he indicated his position quite forcefully to you?

A. Yes.

Q And, it was after that, as I recall, that he, in effect, told you there was no need in going into these other buildings?

A. No, that wasn't exactly how it went. I asked if I could help, or if I could see these other birds, thinking that perhaps there may be something I could learn that would relate to the problem in this house; for instance, if those birds would have been in a state of normal production, if there is a difference somewhere or if they were having a similar problem, maybe there was something I could see, but I was not allowed to go into those houses.

Q When you were at the building "B" complex, I assume you didn't take any pictures of the birds that you posted?

A. No, I did not.

Q I would like you to look at Number "23" and in looking at that photograph, would you tell us, in your opinion does there appear to be an excess amount of fat in that bird? (Handed to the witness)

A. Well, no, I couldn't because of the---

Q Okay, in your opinion does that appear to be an excess amount of fat in that bird, in that photograph, in your opinion?

* * *

body weights may be harmful to performance and livability"?

A. I think if the body weights start to exceed the breeders' recommendations, there is an indication that performance may be harmful.

Q In what respect, Doctor, would it? Obviously, it would have to be lower production, right?

A. That livability and production rates will be lower.

Q Isn't that something that has been known to you and the people at Purina for a number of years?

A. Yes.

Q And, specifically, Doctor, isn't it a fact that you have recommended special feed, growth feed programs for several years?

A. This bulletin was put out in 1971, so, yes.

Q But, isn't it a fact that you have recommended to people involved in the commercial layer business the use of a controlled feed program for several years?

A. I do not recall the exact year that our first publication went out on controlled feeding. We have additional publications on controlled feeding of pullets, but we would also have recommended controlled feeding for chickens six or seven years ago.

MR. CLEARY. Your Honor, would the Court object if the court reporter read that last answer back. Mr. Davis walked to the bench, and I wasn't aware he was

going to continue, and I didn't get it all.

THE COURT. You may read the last answer.

(The court reporter read the last answer.)

Q (By Mr. Davis) Then I take it that while this particular publication has only been in existence since March of 1971, that there were publications before that date containing the recommendations that appear in the one I have in my hand here, Number "67"?

A. I can't go past six or seven years as far as my experience with being with the company, but controlled feeding has been in practice, as a means of feeding birds, for a number of years.

Q That has been recommended, to your knowledge, by Purina to its customers; at least, since you have been in the employ of Purina, which is a period of some five or six years, is that right?

A. This is a recommendation for a specific situation. It is not a blank recommendation.

Q I understand, but at least a program has been recommended to Purina's customers by Purina, to your knowledge, for five or six years?

A. Again, for specific situations.

Q And, one of those situations is the so-called "brown-egg layer," isn't it?

A. This is the first publication that specifically mentions

that word, "brown-egg layers," in 1971 that I have personally been acquainted with.

Q You have had the knowledge of the fact that the brown-egg strain, so to speak; namely, in this case, the Warren Sex-Sal birds have a tendency to overeat while they are growing and to get overweight?

A. In specific situations, this is true.

Q And, for how long have you known that?

A. Some of the work that I personally did, is this what you are referring to?

Q Perhaps I should rephrase that. For how long has it been within your knowledge that this type of bird has a tendency to overeat during its growing weeks, and thus, get overweight?

A. I have known that this type of thing was taught to me probably when I was an undergraduate student at the University of Illinois, in taking my poultry courses, that a heavier bird would have a tendency to consume more feed some times, and put on excessive body weight, such as the broiler breeder, for example.

Q And, how about the brown-egg layer?

A. Well, my knowledge of brown egg layers has been more, has been deeper since I have joined Purina and started to do research studies with this particular strain. So I would say for a specific situation, is that the brown egg

strain could over consume on feed; probably, for the last five or six years I have known that.

Q And, isn't it a fact that you have schooled, or the Purina Company has schooled its area salesmen and servicemen to the fact that this can happen, and, therefore, they should make a recommendation of a controlled feed program in connection with the growing of this type of bird?

A. In specific situations where the man can handle the program, yes.

Q Is this controlled feed program one which has its objective in limiting the energy intake of these birds while they are being grown?

A. Yes.

Q Why is it that Purina recommends this?

A. There are two reasons, at least, that I can think of; one, that by reducing the amount of feed that would be consumed during the growing period, there is a reduction in the feed cost; part of this is made up when the birds are taken off the controlled feeding program once they go into the laying period, and so there would be some loss of feed because they would have a tendency to eat more at that time. A second reason would be to maintain a body weight within the range that the meeting weight breeder would recommend.

Q Is it a part of that latter objective to make certain that

the birds don't get overweight during their growing period so that they don't go into the laying stage in a condition of overweight?

A. Yes. The purpose of that, in general, would be to maintain the body weight that the breeder recommended and have them go into the laying stage at the recommended weights.

Q And, based on your iknowledge and experience, Doctor, if they should get overweight during the growing season and start laying in that condition, is there some likelihood they would tend to produce at a lower rate than normal?

A. In our experiments we have conducted tests on this. We have found that there has been a range of two, or three, or four per cent greater production when we control feed birds, the medium weight birds, in cages.

Q Was that controlled feed program, to your knowledge, given to the people at the Purina plant in St. Johnsbury by March of 1971?

A. I can't testify to dates when they actually received this particular booklet. Our seminars for that year were in March and April of 1971, and I did not participate in the meeting with the St. JOhnsbury people who have participated in it. I don't know the date of that meeting.

Q I see. In the usual course of the operations of the poultry division that you are associated with, Doctor,

* * *

was only at that point, which is roughly 1971, that there was any great emphasis on controlled feeding of pullets, although such programs existed prior to that time.

Q And, were recommended by Purina?

A. I would say that would not be a very strong recommendation at that point because there was a problem of maintaining birds and getting the proper weight on most birds at that time because of Marek's problems, and birds on the floor had less tendency for gaining excess weight.

In connection with the Doctor's testimony, we would like to offer "67" and "79".

MR. DIVOLL. No objection to "67" or "79".

THE COURT. They are admitted.

(Plaintiff's Exhibits "67" and "79" were received in evidence.)

Q (By Mr. Davis) In your work there at Purina, as I understand it, you have something to do with the formulation of feed?

A. Yes, I do.

Q What is that?

A. I set the nutrient standards for the age classes I mentioned before, the replacement pullets and commercial layers, for both the areas of laying birds and for the broiler, and broiler breeding birds. Let me correct myself. Not the broilers, but the broiler breeder and their re-

placements. I would also set specifications for ingredient usage.

Q For both of those areas?

A. Yes, the nutrient standards and ingredients.

Q You set the specifications in order to maintain certain nutrient standards, is that correct?

A. Yes.

Q And, that is for the commercial laying hen?

A. Commercial laying hen, replacement pullets and broiler breeder, and broiler replacements.

Q What factors are considered in setting up these specifications?

A. The requirements of the bird, primarily, dictate, a particular age, the specifications that would be used as far as ingredients. The nutrients, biologically, available, the nutrients those ingredients would furnish, would be a primary consideration from any standpoint. The price of the ingredients, from my standpoint would also figure into the ratio to be computed.

Q Well, first of all, you are concerned with making certain that the right nutrients are in the specifications so that the bird will give a maximum performance?

A. That is correct.

Q And, the second consideration you are concerned with is the matter of getting ingredients which will produce the

various nutrients you want in this feed at the most reasonable price?

A. Correct.

Q Now, do those change from time-to-time? I am referring now to the ingredients.

A. Yes, the ingredients will change periodically, and they would vary from one part of the country to another.

Q Depending on what?

A. The availability of the ingredients and the price of those ingredients.

Q And, how is that determined by Purina?

A. Their price of the ingredients?

Q No. I am more interested at this point in how you determine what ingredients to put into the ration, say, in a certain section of the country.

A. Well, the availability of those ingredients within that area of the country, at a reasonable price, would dictate whether they would go in or not, and the biologically available nutrients they might furnish.

Q Is that part of your activity with Purina to make that sort of decision?

A. To a degree.

Q Would you explain that for us?

A. Well, we would not allow certain levels of excessive ingredients to go in. For example, we would set specifica-

tions on the maximum amount of salt that might go into a ration, or the maximum amount of certain other nutrients--not nutrients--ingredients that might go into the ration, and within the boundaries and guidelines we had worked out that we knew would give satisfactory performance. These standards must be applied to a given area.

Q Who would do that, you?

A. I just stated this is what I do, yes.

Q Once you have set up these standards and specifications, you don't take care of the whole country, you don't take care of it all over the country, do you? You don't make the selection of the ingredients, yourself, for every part of the United States and the world that you service?

A. No.

Q Who does that?

A. There is a group within our company that would, on a day-to-day basis, set up the formulation of various rations throughout the company's operating areas.

Q And, do they use some sort of a computer to do that?

A. Yes.

Q You say that could change on a daily basis?

A. No, I said they are involved in the day-to-day operation of this sort of thing. The rations don't change on a daily basis.

Q But they change according to the amount of a given--strike

that. They change according to the availability of various ingredients, and the price of those ingredients, is that correct?

A. Yes, within the guidelines I have established.

Q Why is it that you establish these guidelines?

A. Well, there are certain ingredients that if, were excessive, may cause damage. I will give an indication of one ingredient, being salt. If it were too high, there would be damage to the performance of the birds.

Q Are there also certain minimums?

A. Not ingredient minimums.

Q Not nutrient minimums?

A. Yes, nutrient minimums.

Q Do you set the standards up in such a way that people working on a day-to-day basis with them are informed they must make certain that there is a minimum amount of certain nutrients in the formula?

A. I set up certain nutrient standards and these must be in a proper level within the ration in order to have the ration formulated.

Q And, if that were not the case; that is, if a certain nutrient level was not, minimum level was not met, could that have some effect on the birds eating that ration?

A. Yes.

Q What effect would that have?

* * *

particular ration results in these amino acids not being up to the minimum levels specified by you, I take it that would have an adverse result in terms of the bird's growth, or if---

A. Are you asking if this is possible in our system we would formulate a ration not with the level of amino acids?

Q I am asking if that happened if certain ingredients were put together so that the amino acid levels were not met, those that you set up were not met, could that result in an adverse effect on the birds eating that ration?

A. I will answer that in general, that if an essential amino acid is at a too low level, if Vitamins A and D were at too low a level, performance would suffer.

Q Does protein contain these essential amino acids?

A. Protein contains some of the essentials; proteins are one source of essential amino acids.

Q I notice that in looking at Exhibit "67," Page 5, there is a program outlined there starting with an 18 per cent protein and then after a certain period of time goes down to 15, and eventually, gets down as low as 12, I think, at one point?

A. Yes.

Q And, does it go back up again at a certain period of time?

A. During the growing period?

Q At any time.

A. Generally, when birds are placed in the laying house, the amino acids furnished to them increase.

Q So you would increase the protein,or do increase the protein?

A. The protein is one source of the essential amino acids that would essentially be increased.

Q That program that appears on Page 5 talked about the use of an 18 per cent protein for the first six weeks of the growing period?

A. Yes.

Q But Purina does not recommend the getting back up to 18 per cent when the birds start into the laying cycle, is that a correct statement?

A. The 18 per cent protein ration that is stated there is a minimum guarantee of protein as required by law. Most states have a minimum level in the laying ratio area. We have a minimum tagged guarantee of 14 per cent per ration that comes under our Life Cycle Program. However, protein level as a source of getting amino acids may be as high as 18 per cent, if that is the level necessary to furnish the essential amino acids.

Q So what you are saying is that Purina knows a way to keep the amino acid balance within the minimum levels required without getting up to an 18 per cent level in protein, isn't that so?

A. No.

Q Well, let's go back to the beginning when the chick is a day old. Purina recommends it be fed an 18 per cent protein for six weeks, doesn't it?

A. Yes, it does. That is the minimum protein level within that ration, by law.

Q I understand, and then for the next six weeks, or from age six weeks to 12 weeks, Purina recommends that this bird be fed a ration with a guarantee of 15 per cent protein?

A. That is the minimum level of protein guaranteed by law.

Q That is what is recommended?

A. Yes.

Q And, when this bird gets up to twelve weeks of age, Purina recommends the use of a ration for the next eight weeks, in other words, from the twelfth week of age to the twentieth week of age of a content of 12 per cent protein guaranteed, is that right?

A. Again, that is the minimum protein level that we can have within that ration.

Q And, that is what you recommend?

A. No, this is the minimum level of protein that can be within the ration you are recommending, based on amino acid levels.

Q I know that. I said you want to guarantee 12 per cent

protein because by doing that, this ration will provide the required levels of amino acids?

A. No, 12 per cent is level of protein it will not go below.

Q You go from 18 to 15 to 12. By this time, when you get to the end of the feeding of the 12 per cent protein, the bird is 20 weeks old and ready to start laying at that time?

A. It would be close to start to lay at this time; if properly managed, it may lay before that.

Q Now, you start going up in a higher percentage of protein at that point when the bird is 20 weeks of age?

A. We increase the protein level to get a level of essential amino acids required at a minimum tag guarantee for rations; at that point, 14 per cent. We have other minimum tag guarantees of 17 per cent.

Q Well, you recommend the use of a 14 per cent protein feed to birds that have been grown on this program, and I am referring to the one that appears here on Page 5 that we just reviewed together?

A. That is a minimum tag guarantee. I am not recommending a minimum protein level of 14 per cent, because it cannot do that for the entire life of the bird. What the program is, states the protein level will never go below 14 per cent.

* * *

happens in that situation?

A. Again, to the point I illustrated before, if you had a ration that is imbalanced, again, using Vitamin A, for example, let's say the energy level there is too little Vitamin A in relationship to the energy level, the bird would stop eating after a certain time, because its energy requirement is satisfied and it might not satisfy its Vitamin A requirement.

Q Is this statement, in general, an accurate statement, Doctor, that if you have a high protein level, you generally have a low energy level?

A. In general, yes.

Q And, the other side of that coin, I take it, would be that if you have a low protein feed, you have a high energy level in that feed, is that correct, generally?

A. In general.

Q Are there some ways you can control the amount of energy in feed?

A. By selection of the ingredients that would be used.

Q Would it also be correct, Doctor, that the bird that happens to consume a feed with say a low protein level, but with a high energy level, could become overweight?

A. It depends upon the balance of the ingredients, again.

Q Explain that for me, please.

A. Yes. You have been talking about protein. Again, it

is really the amino acids, the critical function here. Amino acids, individual ones, could be considered like an individual vitamin. We have specific amino acids such as lysine, not too commonly known names to most people, but they are required and are essential like Vitamin A and Vitamin D is, and so that we have to have those in relationship to a given energy level, and if the energy level, if they are not in balance with the energy level and the bird does not have its energy requirements satisfied before, because we are too low on amino acids, then a deficiency would result.

Q So that we can relate this into simple language, Doctor, and not get involved with technical terms, am I correct the only way a bird can develop fat is from its diet?

A. To develop fat?

Q Yes, to get fat is from its diet?

A. The only source of calories from the time that the bird grows is the ration that it consumes, except what it starts with, yes.

Q If it gets too many calories, it will get fat, right?

A. No, I think it depends on the use of calories that is used. You know, if you need calories, and you are consuming those calories, you won't get fat.

Q Would you agree with the statement, Doctor, that fat can only come from one place, and that is the diet?

A. Yes.

Q And, diet is the feed ration, isn't it?

A. Yes.

Q And, because of that fact, Doctor, in order to avoid excess fat is it necessary that the bird be kept in a proper energy balance?

A. I don't think you can avoid excess fat by keeping birds in proper energy balance. Certainly, to have the proper relationship of the amino acids, vitamins and minerals to energy would be one way,but if the energy is not used by the bird, of course it would start accumulating energy within the body.

Q Would you turn to Page 28 of your deposition, please?

(Handed to the witness)

A. Yes, sir.

Q This is a deposition which you gave on November 16, 1973, Doctor, and didn't I ask you a question on that occasion as follows, and I am referring to the first question at the top of Page 28:"The question to be repeated is that these two doctors have stated that in order to avoid excess fat, it is necessary that the hen be kept in proper energy balance?" Will you tell the Jury what your answer was in November, 1973, sir?

A. May I go back and read the earlier part of the testimony?

Q I just want your answer to the question I asked. What was

your answer then?

A. Well, without going back and reading the earlier part of the testimony---

Q Doctor, do you see the answer to that question right after the question?

A. Yes.

Q What was your answer at that time, sir?

A. My answer at that time was, "I think that is self-evident, yes."

Q Thank you. Isn't it a fact, as a matter of fact in this case there came a time in August of 1972, or early September of that year when this problem of fatty liver syndrome came to your attention, that you made a specific recommendation to Mr. LeRiche that the proteins in the feed, in the ration, be increased from 15 per cent to 18 per cent?

A. I made several recommendations to Mr. LeRiche at that time, and that was one of them.

Q And by doing that, Doctor, isn't it a fact that you were specifically doing it for the purpose of lowering the energy content in the feed?

A. Yes, that was one of the reasons.

Q Do you think, Doctor, that by feeding the higher protein ration with the lower energy content that this would help that condition we have called "fatty liver syndrome"?

A. I can't give you a definite answer on that. There is

some suggestion in dealing with fatty liver syndrome and dealing with the pros and cons, and possibilities and probabilities, and that we seek different treatments, and that this is one of the ones that some people have suggested might be helpful.

Q Well, haven't you found, Doctor, that the body weight of the bird goes down when the energy intake is limited?

A. I would think that, in general, if you were to say feed birds only 80 per cent of what they normally would consume, that body weights would drop rather drastically, but you would also lose production.

Q Supposing you didn't do it that much. Supposing you didn't take 20 per cent away, but only took 5 per cent away, do you have the same result and final analysis it would just take a little longer?

A. It would take a very special ration and feeding technique to do this in poultry operations.

Q And, do you recommend that sort of thing yourself when there is fatty, when this fatty liver syndrome develops?

A. If a person had the capability of doing this, I think this is one way that might be helpful.

Q This fatty liver syndrome, Doctor, is that something that is familiar to you?

A. Yes.

Q You have heard of it in the past, then?

A. It has been a field problem that has been with the poultry industry for some time.

Q And, what is your definition of "fatty liver syndrome"?

A. By the nature of the fact we call it a "syndrome" means we don't really have all the information about it. I think we have to describe it more as a condition in which there is an accumulation of fat within the bird; that there is an increase in the fat infiltration of the liver; that birds may or may not have higher body weights as such, but, in general, they would. They would also have, usually, hemorrhaging within the liver and relatively high mortality. We don't know what causes it. So again, we call it "syndrome," and it is, in that sense, a catchall.

Q You don't always have the high mortality with this condition, however, is that correct?

A. Again, most of the --since it is a catchall term, not all of these things would be there every time.

THE COURT. We'll take our afternoon recess.

(Court recessed from 3:00 - 3:20 p.m.)

(DOCTOR DAVID C. SNETSINGER resumed the stand for further cross examination.)

Q (By Mr. Davis) Once the bird gets itself into this overweight situation, Doctor, it is your opinion that it is rather difficult to correct the situation?

A. It is difficult to reduce weight of birds without some

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A. No. Again, it was not available until after March or April of 1971.

Q Now, we have spent quite a lot of time on what we call "controlled feeding". What is the purpose of the Controlled Feeding Program?

A. There are two purposes. One, is to reduce the cost of raising a pullet by raising the quantity of feed that bird might consume during the growing period. The second is to bring it into the laying period at a desired weight that the producer of that particular strain would recommend.

Q Now, is the program so designed that everybody should be on a controlled feeding program?

A. No. If the birds, for example, are at the proper weight, there would be no reason to do this unless a producer wanted to save the money of feeding, but if the birds are at the proper weight, they should produce at a rate that would be normal for that particular strain once they go into the laying house.

Q In other words, if a grower should watch his birds and see that they were proper weight, and if he thought they were getting overweight, he should start the controlled feeding program?

A. Right. We recommend the growers weigh their birds, particularly during the growing period, usually every two weeks, and if they see the birds are getting excessively

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different formulas for Purina?

A. That is correct.

Q And, that the formula is a proper mixture of these ingredients?

A. To furnish the nutrients required.

Q Is this formula ever changed?

A. Well, the nutrient specifications are standard. In other words, we always try to give the same level of Vitamin A, or the same amino acids, or calcium on an intake basis. We would change--let's take a Mild-Temp ration. As we mentioned earlier, this periodically as the prices of ingredients would change, we might use a different level of each of the ingredients, but the nutrient standard, the level of vitamins, Vitamin A, amino acids, the phosphorous and calcium would always be there in proper relation to the energy level. So on occasions the ingredients would change, but not the nutrient specifications, unless we learned something new to prove the ration would change these, but these would be as we developed the research knowledge behind this.

Q To put this in every day language, if your formula called for, let's say, 300 pounds of corn, if corn became too high priced, are you able to substitute some other ingredient for corn?

A. Yes, we would substitute, perhaps, another grain or

another combination. We could use soy bean meal, for example, perhaps. If that got toexpensive, we might use more wheat middlings or brewer's grains, or other protein sources to furnish that amino acid level that was necessary within that ration.

Q But the guidelines of the nutrients---

A. The nutrient specifications would stay the same, and the rations are not changed on a daily basis, or some times even on a weekly basis. If the prices don't change the relationship, they may be the same formula for a month or more.

Q What do you say about a chicken eating in relation to its energy requirement?

A. Well, in general, most animals, including chickens, in this area eat to meet their energy requirements, and when that requirement is satisfied, they will stop eating. This is the same for humans, in general, although some times we eat more-or-less depending on our social situation, but, in general, most animals will eat to meet their energy requirement, and at that point stop their eating.

Q There has been some recommendations here of a 6 per cent oat hull addition to a ration for 28 days. In your opinion, what would be the effect of this?

A. Well, the addition of oat hulls would become a substitution of some other ingredient in the ration, such as corn.

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(January 14, 1974; 10:15 a.m.)

THE COURT. All right, Mr. Cleary.

MR. CLEARY. Thank you, your Honor. As I indicated in chambers, Mr. Davis has a court commitment in Windsor County which he couldn't get out of, but he will be here later. We call as our next witness, Doctor Edmund Hoffman.

EDMUND HOFFMAN, Sworn

DIRECT EXAMINATION -

Q2 (By Mr. Cleary) Would you give us your full name for the record.

A. My name is Edmund Hoffman.

Q What is your field, or specialty, Doctor?

A. I am a poultry specialist, specializing in poultry nutrition.

Q Where did you receive your undergraduate degree, and where do you do your work?

A. I graduated from Cornell University. I took a Masters Degree at Rutgers University, and I got a Ph.D. from the University of Maryland.

Q What is your Ph.D. in, what field?

A. Nutrition; poultry nutrition and physiology.

Q How about your Masters work?

A. It was in poultry nutrition.

Q What did you do subsequent to obtaining your Masters

Degree? Did you go right on for your Doctorate?

A. No. I was an Assistant Professor at the University of Delaware for awhile, and then I was Professor at the University of Georgia, and I did my graduate work while holding appointments at the two universities.

Q What area did you teach, or did your work when you were teaching?

A. I taught poultry courses in poultry biology, poultry nutrition, and poultry genetics.

Q What did you do after the teaching experience? I take it there was a gap between the teaching experience and the time you obtained your Ph.D.?

A. No, I was teaching all the while.

Q Subsequent to teaching, what did you do?

A. I became Director of Research for a feed company in Boston and stayed there fourteen years, but I didn't work for them full time because I did consulting work overseas. I had a certain amount of leeway there.

Q What kind of consulting work were you doing overseas?

A. I first went to Spain for the I.C.A. and---

Q What is that?

A. Ithax Corporation Administration. The United States was, at that time, interested in increasing egg production in Spain and thought they should have some feed mills and a better ground in poultry nutrition, and as a result of

that, I went into the poultry business with some Spaniards which I did for four years and developed other contacts. So I finally got consulting jobs in Italy, Ireland, France, England and Costa Rica.

Q And, these jobs were all geared to the same thing, setting up this integrated poultry business and type feed?

A. In some of the countries it was trouble shooting to go in and solve a specific problem, and in other countries it was advice on feed compilation; occasionally, on feed manufacture because the Europeans didn't have access to our machinery which permitted a small poultryman and small operation to make their own feed. They had great big feed mills at the ports where the ingredients came in.

Q Would it be fair to say the majority of your overseas work has been related to the field of nutrition, chicken feed and equipment; things of that nature?

A. Right.

Q Subsequent to this overseas consultive work, what did you do then?

A. Feeds were sold, and I went to Maine and worked for an integrated poultry operation there, and I designed and built four feed mills, I guess, and I wound up running one of them in Marlboro, Massachusetts, and then I got tired of that and was flattered by the fact they took me back at the university, so I went back to the University of

Maryland for two years, and I left there in 1968 and went to Connecticut and operated an integrated poultry operation for a couple years, and also operating this mill in Marlboro at the same time.

Q What did you do when you went back to the university?

A. Research in energy; really, physiology aspects of nutrition in relation to energy. We were interested in the fattening of broilers.

Q When you say, "energy," were you concerned with the calorie levels of feeds, or energy type feed?

A. Right.

Q You said at the same time you were back doing this research at the university, you were still running your own feed company?

A. Right. One of my sons did.

Q What kind of a feed company was it?

A. It was a small feed mill in Marlboro, Massachusetts, manufacturing four to six hundred tons a week for several large operators.

Q Would it be somewhat similar to the Pease Grain operation in Burlington?

A. Yes.

Q Would it be larger or smaller than that, based on what Mr. Morrill testified to?

A. It would be slightly smaller.

Q Were you responsible for formulating your own feed there at the mill?

A. Oh, yes.

Q That was your responsibility?

A. Right.

Q After 1968--I think you said was the last cutoff point--what did you do then?

A. In '68, I left the University of Maryland, and I started in operating an integrated poultry operation in Connecticut. That is how I got to know Doctor Bryant so well, and I stayed there two and a half years, and for the last two years--if this all adds up--I just operated Marlboro and farming in Nova Scotia.

Q The integrated operation you talked about in Connecticut, what did you mean by "integrated operation," and what were you doing with the people in Connecticut?

A. It was a poultry processing plant which hatched its own chickens and grew its own chickens, and Marlboro made the feed for them and sold dressed poultry.

Q And, so I take it that brings us pretty much up-to-date?

A. Right.

Q At what point in time did you become familiar with the Vermont Food Industries in Hardwick?

A. One of the people I make feed for called me in August of 1972 and said that he had a friend in Vermont who was

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laying, the first thing you think about is what did the farmer do. The second thing you think about is what disease might they have. Some of these diseases might be readily apparent. They all might be nesting. In this case, I couldn't see anything, but it was necessary to have somebody make an examination of the birds and eliminate disease as a cause of low production.

Q Now you indicated that you found Mr. LeRiche very frustrated, in decisive, or words to that effect. What did you mean by that?

A. Well, I meant I think he had done a lot of thinking and heard a lot of things. His mind wasn't very clear on it, and I felt I had to give some authority to not only to making an independent study, but had to present it to him so he would do anything about it. At the end, I think he was absolutely beside himself.

Q Did he indicate to you how long a period of time his problems with low production had been in existence?

A. He said that he had never been able to get any production out of the complex.

Q Out of the complex. That is the one finished in 1970 some time?

A. Right.

Q And, did he indicate to you, at that time, who was supplying him with the feed requirements in the new complex?

* * *

A. Right.

Q In fact, you have been here throughout the course of the trial?

A. Right.

Q Do you recall the testimony of Doctor Murray and of Doctor Snetsinger with respect to some of the birds, and Doctor Eldridge--I am sorry--with respect to some of the birds they picked from the flock that appeared to be in production?

A. Oh, yes.

Q Would you consider these birds characteristic of the problem, as you saw it and knew it to be, back in August of 1972?

A. No, because the problem was low production, and if you don't make an effort to go and pick the birds that are out of production, it seems to me no one said the birds weren't laying at all. They said they were laying at 60 per cent when they should be at 80, or 50 when they should be at 70. So it was necessary to pick the birds that were missing that 20 per cent.

Q Were you here when Doctor Eldridge testified he in no way testified he participated in the picking out of the birds, that Mr. LeRiche did that himself?

A. Yes.

Q In your opinion, from your conversations and observations

with Mr. LeRiche, would he be competent to pick out birds that were representative of his problem?

A. In fairness to Doctor Eldridge, when you go to a farm you are apt to take the birds the man gives you. I think that I was a little more independent than that.

Q You went through the flocks yourself, as an expert, and picked out the ones you thought represented the problem?

A. He started picking out the chickens, and I said, "No, you leave them alone and I will get them."

Q I take it you did a more thorough examination with some of the birds that you took. Did you open up any of them there?

A. Oh,no. I don't practice veterinary medicine.

Q You took the birds to Connecticut?

A. Yes, I took the birds back to Connecticut, and I went to Massachusetts, and I went to Connecticut the first thing in the morning, and I persuaded Doctor Bryant to post them in my presence and right away, because I wanted to see what they looked like inside. To make a little distinction here, a lot of laymen go out and open up chickens, and in the first place, they don't know what they are doing, and in the second place, they probably interfere with the ultimate solution of the problem out of their ignorance, and I think it is necessary to take the birds to somebody who is competent to perform an examina-

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Q What would they have been?

A. You notice a difference in their combs; by looking at their beaks, you can see the replacement of pigment, and the critical thing in my selecting the birds were to take them out of the cage and palpate them, and you can tell from the softness and spacing of the pubic bones whether they are laying or pretty well laying at a high rate, slow rate, or just recently out. The bird not laying for a long time has the bones close together and will be very hard, and if she is laying, they will stay wide apart and are very soft and pliable. It is like a baby's skin.

Q You were here in court when Mr. LeRiche testified that he observed his birds--and we'll talk now just about the 1972 flocks that were there when you were there--that he observed his birds became pale, or a shine went out of their feathers after they went into production. Is that the condition you found in August of 1972?

A. Yes, in the brown chickens.

Q Is that also an indication the birds are in low production, or out of production?

A. The fact the shine went out of their feathers?

Q And, the paleness.

A. Well, the paleness is. I don't relate this so much to shine.

Q Now, after the examination--it would be a pathological

examination that Doctor Bryant did?

A. Right.

Q What was done then?

A. Well, I called Mr. LeRiche, and they sent him a written report.

Q And, do you recall Doctor Bryant testifying based on that report, the report that was sent to Mr. LeRiche, the findings?

A. Surely.

Q What were those findings, as you recall?

A. He said the birds had fatty liver syndrome and had obesity, which suggested to me he felt that he was differentiating between fatty liver syndrome caused by some of the other causes, since the fatty liver syndrome is a veterinary catchall in which three or four things are involved. He had obesity there, and he recommended they be put on the oat hull diet. I suppose that he was hesitant to recommend salinium because of its doubtful legalityy.

Q When was the next time you came to Vermont Food's complex after that?

A. I came up the 27th or 28th of September.

Q And, what did you do at that time? Who was with you, if any one?

A. I was alone. Mr. LeRiche called me and told me the

situation wasn't getting any better, and in the meantime, the birds had been treated with the fatty liver pack. I assured him on my first visit the fatty liver pack didn't work. Maybe it does in Texas, but in New England the fatty liver pack doesn't work at all in southern New England.

Q What do you mean?

A. Obesity, fatty liver syndrome, what have you; in some years it is almost epidemic in Connecticut and Massachusetts.

Q Do you know why? Do you have an opinion why that is?

A. Well, I think it is almost always a result of the birds getting too fat. They overeat. Now some of the fatty liver syndrome that is diagnosed are these other things the veterinarians throw in, including ttreating these birds with NF-180, which is fine if they have hepatitis, and I am not able always to determine how many cases are due to overeating, but most of them are where you have hepatitis, or where you have the fatty liver syndrome that you get some mortality, and in these cases I am talking about where they overeat, typically there is no mortality, and the birds don't lay.

Q When you say "more mortality," do you mean more than normal?

A. Yes.

Q When you came back up, what did you do at that time?

A. Well, he called me and said things weren't getting any better, and he wanted me to have another look at the flocks. So I came up, and things hadn't gotten any better, and at this time, I was kind of anxious to know that the birds were, in fact, fat to the point where it affected the rate of production. So I went to the homosote house, and I saw a beautiful flock of chickens that had peaked very nicely and represented the sister birds. I told Mr. LeRiche he was the luckiest man in the world to have a controlled flock which I feel was just by accident; as a result of Marek's Vaccine he didn't lose the normal amount of pullets, so when it came time to have them, he had pullets to put elsewhere. So, I went into the Warren house, and I picked another sample of birds, the birds that actually had gone off in production since my first visit. Then I went to the homosote house, and as you can see from the diagnostic reports of Doctor Bryant, I selected the birds in the homosote house the same way I took out birds that were recently out of production.

Q What was the reason you did that in the homosote house if the production in the homosote house was good?

A. I felt if I went in there and the birds were laying and were fat, that didn't prove very much. I wanted to take birds recently out of production to see if they were fat. I wasn't 100 per cent effective, because of the four

birds I took from the homosote house, one did have an egg in it, and birds out of production were hard to find because the birds were laying over 80 per cent. Now when they were laid out on the table, it was the most tdramatic picture I ever saw. In this case, when I got there, Doctor Van der Heide was on duty and had no background in the case, and he kept saying, "We had a picture of this," because we laid out the four birds from the homosote house and they were in good order. They had a modest amount of fat, and the ones from the complex were fantastically fat. At this point, why we made the same recommendation. He talked to Mr. LeRiche about what might be done, and that is that.

Q Did he indicate at that point what Purina had told him they felt was wrong with the problem, or what they felt the problem was, or what was wrong with the flocks?

A. He said a lot of things. You will have to ask me that more specifically.

Q This is the second trip you made?

A. Yes.

Q And, did he indicate that in between your two trips he had been talking with the people of Purina?

A. Oh, yes, and that to use NP-180 and the fatty liver pack, and I told him--you are asking me what he said?

Q Well, at that point did he indicate to you what Purina's

observations or comments were?

A. He said that Doctor Eldridge had been there, and Doctor Eldridge thought the birds had fatty liver syndrome, but I don't remember that he ever said that Purina had a solution to the problem.

Q None that you recall?

A. No.

Q Other than the NF-180, were you aware of any other prescriptions Purina had recommended to Mr. LeRiche?

A. No.

Q So you compared the two birds; primarily, birds out of production from both flocks?

A. Right.

Q One being fed on Purina?

A. Right.

Q Who was feeding the other flock?

A. Pease.

Q And, you found a marked difference between the two birds?

A. Traumatic.

Q What did you do then?

A. I went back to Massachusetts.

Q Were any specimens, or slide specimens for slides taken from the birds that were posted at this time?

A. I am sure there were, but I didn't follow through on that. The next thing that happened was that Mr. LeRiche

called and said that he was winding up in a dispute with Purina and wasn't feeding their feed any more, and before too long a time elapsed, he wanted to be sure he understood the case fully. I gave some thought to the problem and thought, well, if they are really going to fight, I, perhaps, should tighten up the circumstances because there really is no way of knowing when somebody takes samples of birds to a laboratory where the birds came from, and I called Everett Bryant and asked him if he would be willing to come. I was trying to cover my own coat tails here. I asked if he would be willing to come to Vermont, and he said he would, and I called Mr. LeRiche and asked his permission to bring him along, and we came up, and we looked at the red chickens, posted a lot of chickens. We looked at the white chickens which I had also looked at in my visit the first of October.

Q These would be the other two houses in the complex?

A. Right, and he took some samples and confirmed the fact I was getting the chickens from where I said I was getting them, because they were very, very typical. Unfortunately, we got stuck in a snowstorm.

Q When you examined the white birds on the previous trip, how did they compare to the new complex, with the brown birds you had already examined?

A. They were laying at a slightly higher rate, but they

were the fattiest white Leghorns I have ever seen, and I told Mr. LeRiche that they were so fat, I didn't see any solution except to molt them and melt the fat off them. He wasn't very receptive to that idea, because he needed the eggs.

Q In molting, of course, they go totally out of production?

A. Yes, for eight or nine weeks.

Q I show you what has been marked as Plaintiff's "23" and Plaintiff's "24", and I ask you to take a look at those photographs and tell the jury what you see there. (The photographs were handed to the witness.)

A. How many legs?

Q How many legs.

A. Well, I see, I guess, five birds in the right one; yes, five. They are quite fat, and in this case, the birds are also quite fat.

Q Now, you were here when Doctor Eldridge testified he examined these photos, and neither Doctor Eldridge or Doctor Snetsinger who had a problem finding out what plump chickens they were, seemed to be of the opinion the birds were not fat. Do you agree with that?

A. No.

Q Are these pictures representative of the fat condition that you found in the birds in the three complexes when you examined them in the summer and early fall of 1972?

A. No. These aren't as fat as the ones that I got. They were even fatter.

Q Now, after the examination, the last examination, were more slides taken, more specimens taken, more tests done?

A. Right.

Q Were you there when the birds were opened up and studied?

A. I picked out probably three or four of them myself to be sure Everett got what I wanted him to see, and he picked out some.

Q When you said you wanted to be sure what you wanted him to see, what do you mean, Doctor?

A. Well, with all modesty, I think that I am a poultryman, and I understand chickens pretty well, and I think that a veterinarian probably understands what he sees on the inside, but I felt I could go through and pick out a sample better than he could, and a lot better than Mr. LeRiche.

Q And, what was actually discovered at that time? What did you find?

A. We just confirmed the earlier findings, and that was these birds, whether they were laying or not laying, were very fat, and it was an out-and-out case of obesity, and, by the way, we eliminated the possibility, I feel, of any other pathology being involved.

Q When you say, "pathology," you mean any other disease?

A. Any other disease.

Q And, you ruled out the possibility of some other disease having a bad affect on the production of these birds?

A. I feel we did.

Q Now, did you ever get up to the Maine flock?

A. No.

Q Did you review the reports of the Maine flock?

A. I did.

Q And, you were here when the testimony on the Maine flock was introduced?

A. Right.

Q Is the finding that Doctor Gibbs noted in his deposition of the Maine flock, consistent with your finding of the birds in "A," "B," and "C"?

MR. DIVOLL. Objection.

THE COURT. What is your objection?

MR. DIVOLL. We don't think there is ground work enough with this witness to testify in that respect.

THE COURT. I think that is right, and we'll sustain the objection.

Q (By Mr. Cleary) Doctor, you were here when Doctor Gibbs testified? His deposition, actually.

A. Right.

Q And, you had an opportunity to review the diagnostic reports that came from the University of Maine?

A. Right.

Q Have you talked with Mr. LeRiche about the condition as he found it to be in the Maine flock?

A. Yes.

Q And, do you have in mind the poor production record, and the other evidence that was in the diagnostic reports?

A. Yes.

Q Now, what I am asking you, based on all of the information that you had, and have had available during this trial, in your opinion, are the findings of Doctor Gibbs consistent with your own observations in the "A," "B," and "C" Building flocks?

MR. DIVOLL. Objection. Same objection, with the additional objection that the information--we don't know what it was that he received from Mr. LeRiche, and whatever it was, it was based on hearsay, as far as we are concerned.

THE COURT. I will sustain the objection, on that basis.

MR. CLEARY. On which basis, your Honor.

THE COURT. Mr. LeRiche's statement to the Doctor.

MR. CLEARY. Being hearsay?

THE COURT. Yes.

Q (By Mr. Cleary) Doctor, were you here in court when Mr.

LeRiche testified as to what the condition was in the Maine flock?

A. Yes.

MR. CLEARY. We would rephrase the question, at this time, your Honor, including the observations of Mr. LeRiche which he testified to under oath, we would ask the same question.

Q (By Mr. Cleary) Do you have an opinion as to whether or not the problem with the flock, as it was described by Mr. LeRiche and the others, is the problem that you found in "A," "B," and "C" Buildings?

MR. DIVOLL. Objection.

THE COURT. We'll take the answer.

A. I think it is fair to say it is consistent. The is the word you are using, isn't it?

Q (By Mr. Cleary) Yes. Now you indicated that you did have the opportunity to go into and go through the houses when you were looking for the birds?

A. Yes, I had free run of the houses. I, apparently, was privileged.

Q What observations did you make with respect to the conditions, the management conditions that you saw there?

A. I thought the management was above average.

Q How about in the homosote building?

A. Just as good. It is a slightly different type building, but just as good.

Q Did you find any indications of poor management and its effect on production?

A. No.

Q And, that would hold true of "A," "B," and "C", and the homosote building as well?

A. Well, having in mind on my first visit I only went to the middle building. I guess that is where the red chickens are, and it was on a second visit I can comment on the other part of the complex.

Q Based on the total number of trips that you made and your observations up there, do you have an opinion--did you form an opinion as to whether or not management factors were any influence at all in poor production?

A. Well, it is hard to say "Yes" or "No" to that. Can I explain it a little bit?

Q Surely.

A. If you are talking about mismanagement being involved, I think we can exclude that. There may be some basic management decisions that were made there, and I don't know who made them, which, perhaps, could be involved.

Q For example?

A. The way the birds were fed when they were being reared, and the feeding program while they were in the laying house.

Q What did Mr. LeRiche indicate to you was the program that

he was on, or what type of feed, if he told you, were they being fed, and at what stages in their life were they being fed it?

A. He told me that they were on 14 per cent protein diet which was supposed to be adjusted according to the temperature in which it was fed, and he was quite excited about the fact. You know, poultrymen talk with one another, and all this knowledge is very dangerous, and he felt they did not have enough protein, and I warned him that was a dangerous conclusion to arrive at; that would possibly cloud some of the other things.

Q What did you mean, you advised him of that, Doctor?

A. I thought that he shouldn't be concluded on the basis of what is said on a tag, that there was a deficiency or a need for something else.

Q What were your observations?

A. Maybe that isn't clear, is it?

Q I am not sure. Maybe we will clear it up with this question. What were your observations about the type of a feed program they were on as baby chicks, and what did Mr. LeRiche indicate to you was the affect?

MR. DIVOLL. Is there any evidence in this case that he knows what kind of a feed they were on as baby chicks?

MR. CLEARY. That is what I just asked him.

THE COURT. We'll take the answer.

A. That didn't come---

MR. DIVOLL. May I have the question read.

(The Reporter read the pending question.)

MR. DIVOLL. We withdraw our objection.

A. That didn't come up. I didn't ask him how the pullets were raised. I asked him how the pullets were when he housed them, and I was concerned because he said they were beautiful, and in my experience, beautiful pullets always tend to be a source of a problem. If they don't look too hot, that means probably they will get in there and get on a good diet and go. When pullets come in beautiful and they are plump, I start to worry. That is all that was said about the chicks, just by inference.

Q (By Mr. Cleary) You were here when Mr. LeRiche testified that the birds looked beautiful. He said they looked a little plump, that he thought they had shiny combs and their feathers were shiny when they were housed. He had reference, I think, of the birds that went into the Complex "A," "B," and "?". Now, with respect to the birds that you observed in 1972, and Mr. LeRiche's comments with respect to how those birds looked when they were housed, what is your opinion as to the condition these birds were in when they did go into those laying cages?

A. I think they carried a lot of condition.

Q What do you mean when you say that?

A. They were heavy and had been on a high plain of nutrition, viz a vie a bird raised on a restrictive program and held back and comes in sort of lean and hard. It is sort of like training a football player, you see. The football player comes to camp and has a lot of lard on him, and you get him in shape. The restricted feeding program for pullets is really designed to bring these birds into production, lean and hard.

Q Were you aware, or did Mr. LeRiche indicate to you whether or not there was any controlled feeding of the baby chicks?

A. It was never discussed.

Q And, subsequent, you have heard his testimony which he indicated that there was no controlled feeding of the baby chicks prior to going into the laying house?

A. I heard it here, yes.

Q In your opinion, what relationship is there, if any, between the flow controlled feeding as a baby, and going into the house in a fat condition, or a plump condition?

A. Well, if pullets are housed fat, then it is somewhat easier for them to get too fat while in the laying house. I think that follows.

Q I think you said, or the testimony thus far has been that all of the birds, as babies, were fed the same way. Is that your understanding?

A. Right.

Q And, we are talking about all the birds that have gone into "A," "B," and "C"?

A. Right.

Q Now the birds that you observed in the homosote house, it is my understanding they also went into that house in the same condition their sister birds did in the other complex. Is that your understanding as well?

A. Right.

Q How do you explain the fact that the birds in the homosote complex laid so well?

A. Well, there is no paradox here. The fact that they are housed in a high condition is not absolutely incapacitate, and apparently the diet in the homosote house didn't compound the problem, didn't complicate it. We know it was somewhat higher in protein and reportedly was somewhat lower in energy, and the birds took off and went to a high rate of lay; got their energy intake in balance with their requirements, and the liability of having perhaps a little too high condition didn't hurt them.

Q You were here when Doctor Snetsinger testified, generally speaking, where you have a high protein feed, you have a low energy, or low calorie feed. Do you agree with that?

A. Lower.

Q Lower. What is your understanding of the protein level

that the birds were on in the homosote house for the energy level?

A. My understanding was that they were on 18 per cent protein, and I suppose that would reduce the energy level 4 or 5 per cent.

Q And, how about the birds in the other complex?

A. Well, the guarantee was 14 per cent, which would assume a somewhat higher energy level.

Q Perhaps, 15 or a little more?

A. "Energy level," I said.

Q I am sorry. A guaranteed 14, but perhaps higher than that?

A. I am not commenting on that because in the same way that these people guarantee 18 and give 19, they might guarantee 14 and give 15. So you can only talk in terms of what they guarantee.

Q Well, tell us, Doctor, how did the birds in "A," "B" and "C" complex get fatter and go out of production after they were housed?

A. Well, they overate on energy.

Q Why was that, if you know?

A. Do you want to know all the reasons why birds overeat? Is that what you are asking?

Q No. In this case, based on what you know about the feed ration, and the way they were raised as babies or pullets, why did they accumulate all of this fat?

A. I don't know anything about the feed ration, but you can say that they overate on calories, because the only way to get fat is to overeat on calories.

Q Would that be a feed problem?

A. Absolutely.

Q How, actually, is it done? When you say they overeat on calories, why?

A. The statement is always made, and obviously it is true, that all animals tend to eat in terms of their energy requirement, but like many others, some times it is not completely true. For one reason or another, under certain circumstances, birds overeat. It has been well established and well documented in the literature, the higher the energy of the diet---

Q Meaning, calories?

A. Calories; the more calories the birds consume, and as a matter of fact,. there is some factors so you can figure out how much they are going to overeat. We know that in caged houses we have some problems, because birds tend to overeat just because of boredom; because there is a theory that says they overeat because they are looking for more calcium in the feed. We know if we put commels, which is to take the feed and make it into a little pellet, in the chicken house, we can get the birds to overeat and get fat. So by changing the particles of the size of the feed, we

can make them overeat. To the general observation, they overeat, and in many, many cases in the poultry business, birds overeat and get too fat, and you have to remedy the situation, and if I can say one other thing just so I complete the picture; in the Northeast, the way our feed ingredients are priced, we tend to have a high energy diet. It is really a big advantage on balance, because if you have a high energy diet, it takes less feed to produce a dozen eggs, so you make a trade off, you see. I make the diet high in energy, and I put it out in 50 flocks, and 48 flocks, for a lot of reasons including the way the pullets are housed, the diet goes along very well, and then in the 1 or 2 per cent of the flocks where the birds overeat and get fat, you have a problem, but it is a trade off, and it is a deliberate trade off typical in the Northeast area.

Q By whom is it a trade off?

A. By the feed manufacturer, and he is really rendering a service to the poultryman, because where it works, you produce eggs cheaper.

Q And, where it doesn't work?

A. Where it doesn't work, you have a problem.

Q Is that what happened in this case, in your opinion?

A. I can't say that.

Q Now, whose responsibility is it, based on your years of

experience in this field, not only in nutrition but in feed formulation and sales, to control the energy level of the feed that the chickens are consuming?

A. The feed manufacturer's.

Q It is not something, in your opinion, that Mr. LeRiche would be responsible for?

A. No.

THE COURT. We'll take a short recess at this time.

(Court recessed from 11:00 - 11:15 a.m.)

Q (By Mr. Cleary) Doctor, we were talking before the recess of the cause of the problem of the fat birds, and I think you testified that a high energy or high calorie diet, particularly in birds that had been housed in a plump condition, causes obesity, is that correct?

A. Right.

Q Now in this particular case, in these flocks that we have been talking about in the complex in 1972, we had low production as well, is that your understanding?

A. Yes.

Q Now, based on this, do you have an opinion as to the cause of the low production?

A. Birds got too fat.

Q And, again, how did they get too fat?

A. They consumed energy calories.

Q In your opinion, that is a feed problem?

A. Yes.

Q Am I correct in assuming, or in stating that the reason for low production then, is feed?

A. Right.

Q Now, you indicated that Mr. LeRiche had told you that he had had poor production in his new complex?

A. Yes.

Q And, this goes back to the period after the new complex was constructed?

A. Yes.

Q Now assume, as Mr. LeRiche has testified, that the birds, when housed back in 1971, had shiny combs, shiny feathers, and were plump, and assume further that the feed program that they were on in the flocks, which we will demonstrate were on the same program as the birds were in 1972, and assume further that the low production results which were achieved, or not achieved, in 1971 were consistent with the low production in the flocks in 1972, do you have an opinion as to whether or not the cause of the poor production is the same?

MR. DIVOLL. Objection.

THE COURT. What is your objection?

MR. DIVOLL. That this is based upon an assumption not in evidence.

THE COURT. What assumption isn't in evidence?

MR. DIVOLL. Well, I will have to have the Reporter read the question, and then I will explain.

THE COURT. All right.

(The Reporter read the pending question.)

MR. DIVOLL. As we understand the testimony, Mr. LeRiche did not testify as to that assumption when the birds were housed in 1971. The second assumption was that the feed program was the same, and the testimony there, there is no testimony here about the feed program, and as a matter of fact, there is testimony that the feed program was not the same. The third was that the low production was consistent. The only testimony we have got on production was that Mr. LeRiche said his production has always been low, but we don't know how it was low with respect to the different flocks, or how low it was. So we can't say it was consistent, except it was consistently low, taking Mr. LeRiche's testimony in the light most favorable to him.

THE COURT. Read me that part.

(The Reporter read the pending question.)

THE COURT. Counsel come to the bench, please.

(At the bench.)

THE COURT. What do you say as to the type of feed the birds were on prior to 1972? I didn't understand

* * *

duction is the same?

MR. DIVOLL. It is understood our objection goes to this question?

THE COURT. Yes, we'll note your objection, and this calls for a "Yes" or "No" answer, Doctor.

DOCTOR HOFFMAN. Well, your Honor, it requires one more qualification he didn't put in.

THE COURT. Then the answer has to be "No," doesn't it?

Q (By Mr. Cleary) Doctor, I think I know what you have in mind. Assume further that there were no disease factors which would seriously adversely affect production.

A. Then the answer is, "Yes".

THE COURT. Yes, he has an opinion.

MR. DIVOLL. We object to that and call the Court's attention that Mr. LeRiche testified that he had disease problems; specifically, Marek's, at least in some of these flocks.

Q (By Mr. Cleary) While the Court is looking, let me ask you this, Doctor. You were here when Mr. LeRiche testified?

A. Yes, sir.

Q Is your impression he had testified he had a flock problem with Marek's disease?

A. No.

Q He did indicate in severe isolated cases he did have birds

that had Marek's?

A. Right, and at that time, everybody had Marek's. Marek's has only been eliminated in the last 18 months. It is like fleas on a dog.

Q In your opinion? Strike that, there is no pending question.

THE COURT. We'll allow the answer.

A. Yes.

Q (By Mr. Cleary) Can you tell us what that opinion is to the cause of the low production?

A. I think the facts are consistent with the diagnosis of the birds becoming too fat.

Q And, again, in your opinion what is the cause for the birds becoming too fat?

A. They overconsumed on energy.

Q Again, that is a feed problem?

A. Right.

MR. CLEARY. May I have just a moment, your Honor?

THE COURT. Surely.

Q (By Mr. Cleary) Doctor, in your opinion can birds in the laying cycle, such as you have observed them, that were markedly obese, is there a point where they become too fat, and there is very little, or anything that can be done for them?

A. Short of molting them.

Q Short of a total molt?

A. Yes.

Q The birds that you observed in 1972, would it be your opinion that those birds had reached, or were reaching a point where there was very little that could be done for them after that?

A. The red chickens, it was debatable. I really felt the oat treatment could save the red chickens. I thought the white chickens were very obese, and there was serious doubt in my mind that dietary restriction would take off enough weight, the dietary restriction analogous going on at this time.

Q If you don't lose a sufficient amount of weight, would you or would you not expect egg production to increase or improve?

A. I don't understand you.

Q Without the removal of this necessary amount of body fat from a diet.

A. I think they would never come back.

MR. CLEARY. I think that is all we have at this time.

CROSS EXAMINATION

Q (By Mr. Divoll) Doctor, in reciting your qualifications, you went into your past experience with chickens, and I

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layers. I have been involved with birds that tend to get fat.

Q Now, you have mentioned, I think, the Hartford integrated poultry business there?

A. Right.

Q And, if my notes are correct, that was entirely a broiler business?

A. Except for the breeder flocks.

Q They were broiler breeder flocks?

A. That laid eggs.

Q Yes, and then you started a poultry operation in Nova Scotia?

A. Right.

Q What is that?

A. That is broilers; entirely broilers.

Q Now, let's see if we can first eliminate the things we can agree on. What is your position in respect to a protein level?

A. My position is that there is an amino acid requirement per bird per day in order for a bird to lay, and that all the talk of percentage protein and the per cent of amino acids in the protein is a little bit aside from the fact which is that a bird has got to ingest so much of the critical amino acids and a supply of the non-essential in order to lay. So you have to start by knowing how much a

bird eats a day and supply so many grams of protein, of amino acids to meet it.

Q And, if you supply the required amount of amino acids, is it your position that the protein level can vary and it makes no difference?

A. Yes.

Q You were here during Doctor Snetsinger's testimony?

A. Right.

Q Then you agree with him on that?

A. Specifically, what am I agreeing to?

Q That as long as the feed contains the required amount of amino acids, that the protein is unimportant?

A. Per cent used, protein is unimportant.

Q Now then, we come down to what you term energy or calories?

A. Right.

Q And, I think throughout your testimony that you kept talking that the energy level that was being fed to these birds was too high?

A. Yes.

Q Now, what is, in your opinion and your experience as a nutritionist, the proper energy level?

A. The proper energy level is the energy level that permits the bird to maintain an energy balance between its requirement and its intake.

Q Now, would you give us that in--I don't know how they

measure it, but like calories per pound?

A. There is a wide range. It is not possible to say that.

Q Now, a good portion of your background has been in the formularization of feeds?

A. Yes.

Q In formularizing these formulae, what energy level did you seek to attain?

A. I sought to attain the energy level that would maximize the poultryman's product, and this varies with the price of ingredients, and varies with the season of the year, and all the factors, Mr. Divoll, that go into formulating the feed. Birds can do very, very well on a low energy ration, particularly layers, and the only advantage to a high energy diet is that it requires less feed to produce a dozen eggs. So you have a great latitude in the final analysis per cost of feed per dozen eggs.

Q You have expressed an opinion here the reason these birds were fat was because they were on too high an energy diet?

A. I think what I said, they overate on calories, and from that, you infer the energy level of the diet is too high.

Q But did you check what the energy level was?

A. That is not possible to do.

Q Then how can you say that the energy level was too high when you don't know what it was?

A. Very simply, if you get fat, or a bird gets fat, it is a fact that you have eaten too many calories, and you take them off the same way by not eating them.

Q If I get fat, I say it is because I don't get enough exercise.

A. Then, obviously, you haven't been on many diets. I have been fat all my life, and the way to lose weight is to stop eating.

Q So you were unable to tell us a recommended energy level?

A. Right, nor could anybody else.

Q Now, a good portion of your---

A. If you tell me how many pounds of feed you want to produce a dozen eggs for, and give me a rate of production, I could guess one pretty close.

Q Were those records made available to you?

A. To me?

Q Yes. I could look it up. Did Mr. LeRiche's flocks--did you attempt to determine what the consumption of these birds was?

A. Now, you asked me if I could recommend a level. Did I attempt to determine consumption? Yes.

Q What did you find it to be?

A. Within the limits of his records, which is subject to the same error of all commercial poultrymen, which is, they have a bulk bin. They make very large feed deliveries,

and unless you get records for a whole month and divide by 30 to cancel out some of the records, I felt the birds were eating too much. He doesn't agree with me on that, but I think they were eating too much. Mr. Divoll, this is a very warm house. He keeps it warm, and his feed consumption is on the high side, in my experience.

Q You say he kept the house warm?

A. It is built to be kept warm, and it is a warm house.

Q Is this a recommended practice?

A. I think so.

Q Now, a great deal of your experience has been in the New England area, has it not?

A. Yes, sir.

Q And, I am sure you are familiar with the recommendations made by different New England colleges?

A. Well, I couldn't quote them.

Q Well, are you familiar with the New England College Conference Board?

A. Yes.

Q I show you a pamphlet marked for identification as Defendant's "C", and entitled CHICKEN AND TURKEY RATIONS, 1972 PRACTICAL FORMULAS, recommended by the New England College Conference Board based on experimental work in New England, and ask if you are familiar with this pamphlet? (Handed to the witness)

* * *

the Doctor indicated he was not familiar with that exact pamphlet.

THE COURT. We'll let the Doctor answer the question.

DOCTOR HOFFMAN. (To the Reporter) Would you say it again?

(The Reporter read the pending question.)

A. Yes.

MR. DIVOLL. At this time, we would like to offer Defendant's "C".

MR. CLEARY. Your Honor, I don't know whether it is necessary for us to approach the bench, but we would like some time to review this.

THE COURT. Haven't you seen this before, Mr. Cleary?

MR. CLEARY. No, your Honor, and it wasn't listed as one of their exhibits.

THE COURT. Well, it has been marked for some time.

MR. CLEARY. We never received a copy of it, to the best of my knowledge, your Honor.

THE COURT. Well, Mr. Divoll, can you cover some other area between now and noon so counsel for the plaintiff can look at Defendant's "C"?

MR. DIVOLL. Yes, your Honor.

Q (By Mr. Divoll) Now, Doctor, I think you said it was accepted generally, a high protein diet was a low energy diet?

A. Right.

Q And, therefore, an 18 per cent ration, as opposed to a lower one, as a general thing, would be a lower energy diet?

A. Right.

Q And, I think you testified that you knew, or had been informed that the birds in the so-called homosote building were on an 18 per cent protein diet?

A. Yes.

Q And, you testified that you were informed that the birds in the Complex "B" were on a 14 per cent ration?

A. Yes.

Q Now, you claim that you were informed they were on 14 per cent ration?

A. Well, the tag said 14 per cent. I have restricted my testimony to the guarantee on the feed.

Q Would that make any difference in that opinion if the feed recommended was a 14 per cent ration, but that at Mr. LeRiche's specific request that that was changed to 15 per cent, and the feed that he received was a guaranteed 15 per cent?

A. That makes no difference.

Q It makes no difference?

A. No.

Q So, it doesn't make any difference whether you are feeding 14 or 15, but it does make a difference if you are feeding 18?

A. I didn't say it made a difference between 14 and 18. As I remember my testimony, I said I warned Mr. LeRiche that his concern about the per cent of protein that was being fed in the complex was a dangerous thing, in the sense that we weren't working here for the problem in protein. We were working with birds too fat and over-consumption of energy. I also pointed out to him if they said 14 per cent on the tag and the feed really was adjusted according to the weather, they might well be putting in 17 per cent protein, and he would have no way of knowing that.

Q Yet, you lay the problems to the over-consumption of energy?

A. Right.

Q And, apparently from the information that was given to you, you gathered, in your opinion, that the homosote birds, on 18 per cent, were doing satisfactorily?

A. I don't think I testified, Mr. Divoll, to the fact it was 18 per cent; just the fact it is a coincident they had complete control, and lean birds in one, fat birds in one; high production where the birds were lean, and low pro-

duction where the birds were fat. I don't care what they were fed. I was looking at the chickens.

Q We can't help but draw the conclusion you felt the birds in the homosote building were not consuming the protein as the birds in building "B"?

A. Obviously, I can't be permitted to have you tie it down to protein, because I am not saying that.

Q I don't care what we tie it down to, but how do you know that the birds in the homosote building were receiving a lower energy feed than the birds in the building "B" complex?

A. I didn't say that. I said they were thinner, and, by inference, if the birds are thinner, they are not eating as many calories.

Q So, there is an inference that you draw from that feed?

A. Right.

Q Then you don't know of your own knowledge, or the knowledge that you have made from investigation, what the different energy level in the feed was that was fed to complex "B" and the homosote building?

A. It wouldn't be possible for any one going in to make a distinction in the energy level of the feeds. You can only say how the chickens looked. If the chickens are thin, they haven't had as many calories. If they are fat, they have eaten a lot of calories. I haven't said anything about

* * *

A. Salinium is an element, a trace element, which is toxic in very small amounts but turns out to be very beneficial in areas and in feeds where it is deficient. There has been salinium requirements established now, and in a case of exudate of diathesis in baby chicks, it produced a very prompt and miraculous response, and in my own experience of treating lots of these cases, it has a beneficial effect, and in some cases of fatty liver syndrome.

Q If I understand correctly when you first came there it was around the 8th of August of 1972?

A. No, the 28th.

Q The 28th of August?

A. Yes.

Q I guess it was Doctor Murray that was there on the 8th of August?

A. Could be.

Q And, at that time, you only went into what we call the "B" complex?

A. I only examined the birds in the "B" complex; within my memory, is that I went briefly into "A", I think, the third house, as a matter of looking at the house. I paid no attention to the white Leghorns on that visit.

Q You were called there for a problem of low production?

A. Right.

Q And, was there any complaint, at that time, made of low production in "A" and "C" buildings?

A. Not specifically. The complaint was that he hadn't been able to get any production out of the complex from Day One, and I don't recall any specific discussion of the other two flocks; just the general statement that he couldn't get the birds to lay there, and I questioned him because I thought maybe this wasn't right, and I said, "How do you know you can make birds lay," and he told me about the homosote house.

Q If you were there for a specific problem as a consultant, and you had the information that there was a generally low problem of low production in the whole complex, why didn't you go into "A" and "C" buildings?

A. Well, for a lot of reasons. One of the reasons is that I wanted to identify the problem, because if I went any further and if I arrive at the University of Connecticut with more than four or five specimens to do, they will throw me out, and as far as I was concerned, this was a preliminary thing. The laboratory winds up with a lot of chickens and only want enough to attach the problem, not to study it exhaustively. So on the first visit, I looked at the birds which were laying at the low rate, and I remember him saying that the white Leghorns were not laying as well as they should, but laying better than the red ones.

* * *

A. Right.

Q And, so there you say that their production is good so those birds were getting the proper amount of the calorie level in their feed?

A. No, I didn't say that. I said they are in balance as far as energy was concerned.

Q And, in "B" complex you are claiming they are out of balance?

A. Right.

Q So now, what I am trying to determine is the amount of energy that the homosote building was getting and the amount of energy "B" building was getting to find out what the out-of-balance was?

A. The out-of-balance is any time the bird gets fat it is eating too many calories, because there is nothing you can do with the excess calories it consumes except lay it down as fat. You can't spit it out.

Q Well, if it is eating and it is not laying, it is getting fat, isn't it?

A. You can argue that way.

Q And, Doctor Bryant agreed with this?

A. But what specifically did he agree to now?

Q That it was a problem to know whether the getting fat was caused by the not laying, or the not laying was caused by the getting fat.

* * *

Q And, this is the way Doctor Polin did?

A. Yes.

Q Do you know whether or not this is the only way he could create a fatty liver syndrome?

A. I don't recall. I don't remember the preliminaries well enough to remember whether he tried anything else.

Q As a matter of fact, you don't even know there is such a thing as a fatty liver syndrome, do you, in itself?

A. I think fatty liver syndrome is used by veterinarians and covers a wide gamut of things.

Q It is more of a condition, to you?

A. Right.

Q Now at some time during your testimony, Mr. Cleary gave you what I call an assumption question, and paraphrasing it, he wanted you to assume that one of the items was that the feed programs were the same?

A. Yes.

Q And, then he asked you that with these other assumptions, and with this assumption, the feed program in the other flocks that you didn't examine that had been in existence prior to this date, if you could give an opinion as to why they did not produce. Do you remember this?

A. Yes.

Q And, you said you could, and you gave the opinion that they did not produce for the same reason as these flocks that

you examined?

A. No, sir, I didn't say that. I said the final solution was consistent with the earlier facts. That is what I was attempting to say, and I think I asked him, specifically, if he was using the word "consistent".

Q Based upon--you were making that assumption based upon the fact that the feed programs were the same?

A. Right.

Q If the feed programs were different, would you make that same assumption?

A. No.

Q Doctor, to your knowledge, in all the time you have spent in the poultry industry, has anybody ever been able to produce this fatty liver syndrome, or fatty liver condition, as you call it, by the rations, feed rations?

A. Not to my knowledge. You mean, deliberately under controlled conditions?

Q Yes.

A. No.

MR. DIVOLL. You may inquire.

REDIRECT EXAMINATION

Q (By Mr. Cleary) Doctor, one of the last things Mr. Divoll asked you was whether or not, "If the feed programs were different," meaning 1971, the period we are talking about, "would you make the same assumption". You said, "No".

* * *

of whether or not a bird eats to meet its energy, or calorie level, or what calories it needs to live and lay eggs, probably, did you base any of your opinion on that on anything that Doctor Morris had to say?

A. Yes.

Q How is that relevant in our particular case here?

A. Well, Doctor Morris came up with the first review of the literature that established once and for all that the statement we always made, that the bird eats to meet its energy requirement, was nothing but a tendency or generalization, and it wasn't absolute, and you just can't go on blatantly assuming they perform according to that rule.

Q When you say, "over-consumption of energy," tell us again exactly what you mean.

A. Well, if you had a chart and the line was like this for the amount of energy level of the feed, if you assume that the bird really adjusts perfectly its feed consumption to its energy requirement, then you would plot feed consumption and both lines would be parallel to each other going up at an angle like this. This top line is tilted to the effect of energy intake. As the diet of energy goes out, it is higher and they overeat, and he says for every ten calories you put in, you get such a per cent of over-consumption, which I don't remember exactly, and it is the standard piece of work in the field.

Q And, this has been known for some time?

A. I think he published the paper in 1967, '68.

Q And, practically assuming that this is an identifiable problem that has been in the literature for some time, and you, as a feed manufacturer, have known about it, how do you compensate for the problem and prevent birds from getting fat and not laying eggs?

A. Well, we don't. What we do is take a calculated risk and when we get in trouble, we solve the problem.

Q How?

A. By putting the birds on a diet.

MR. CLEARY. We don't have anything further, your Honor.

THE COURT. Mr. Divoll.

RECROSS EXAMINATION

Q (By Mr. Divoll) Doctor, just to refer to these charts for a minute, they are entitled a "Goal Chart," aren't they?

A. I am not aware of that, sir.

Q Which exhibits did you look at?

MR. CLEARY. Thirty and "4".

THE COURT. What numbers?

MR. DIVOLL. Number "30".

A. This one says, "goal" on it.

Q (By Mr. Divoll) This one does not. That is Number "4".

Now, do you know under what conditions or how the producer of the chart arrived at that range?

A. You mean what inputs he made in order to draw it?

Q No. Probably we are saying the same thing. Just experiment input experience?

A. I think the way they are done is that they take an average of how high they can get the birds to peak, and the rate of increase on the way up is fairly constant for all these chickens that are raised in a certain way, and have a certain maturity date. Then they take the production over the whole year and they make this curve to reflect that production.

Q But how is that done? On experimental flocks that the breeders have operated?

A. I don't think so. I think it is done on the basis of field records.

Q Whose field records?

A. Well, they all have franchised hatcheries and put out a lot of chickens, and I suppose they have enough reference to do this.

Q This is an assumption on your part?

A. Well, all right, it is an assumption.

Q And, these people who put out these charts are trying to sell this particular breed of chick that they are promoting with these charts, isn't that correct?

A. Right.

Q So wouldn't it follow that they are trying to make these charts, at least, the expected range of these charts look as good as possible?

A. Yes, that is true. The only relative difference among them is the brown is a slightly lower line. They all come out of the same hopper.

Q The white Leghorns are generally accepted to be a little better producer, are they not?

A. Yes.

Q But you don't get so much for them for meat when you sell them?

A. No.

Q You aren't in the cow business, but that is the same between the Jersey and the Holstein cow, isn't it?

A. Right.

Q You said something in my cross examination and in Mr. Cleary's redirect about the Blue Seal Feed Company. Now, what did you mean by that?

A. Well, when Mr. LeRiche left Purina, he started to feed Blue Seal.

Q Yes.

A.. And, how far do you want me to go?

Q As far as you want. It is complete news to me, Apparently, there was some problem there with Blue Seal, and I am

* * *

A. No, that is just what I am saying, and I don't know the initials "L.C." The only thing I know about pullets, they are on full feed. That was the question and the direct answer I got.

Q Would you have been able to give your opinion if you knew that the growing program upon the chickens that you saw wasentirely different from the other birds?

A. Gee, I am sorry. I don't understand what you are asking me. What other birds?

Q Well, the plaintiff is claiming here damages for the feeding of, I think, seven flocks. Three of the flocks were birds from which a sample was taken, the Dostie flock, the "B" complex flock, and the white Leghorn flock in complex "C".

A. Okay.

Q And, as I understand it, an assumption question was posed to you that from what testimony was given in respect to those birds, and assuming that they were grown on the same program, under the same feeding program, what would be your opinion as to the problem with the other four flocks that you never saw. Now, do you understand that?

A. Yes. One of the questions--I am sure you want to make this clear--one of the questions is that the birds always arrive in a plump condition.

Q That is an assumption you took?

A. I thought that was the assumption that he gave me, and if you add that, I can say, "Yes".

Q Well---

A. You know, I don't care about the program. All I want to know is what the product is. There are programs, and programs. If they raise big, heavy weight chickens, that is consistent with the problem we have. If they raise light weight chickens, regardless of the problem, it isn't consistent.

Q I understand that, but what you are saying here is that the four flocks that you have testified about that you never saw, were a certain condition when they went into the laying houses?

A. That is what they said.

Q And, this was assuming that they were fed the same feeding program?

A. That describes how they got in the same condition as all the pullets.

Q No, it is assuming they fed them the same growing program.

A. You don't have to make that assumption. What you need to do is concern what kind of pullets were housed.

Q But you don't know what kind of a pullet was housed?

A. No; just a hypothetical question.

Q So you have to make an assumption what kind of a pullet was housed?

A. Well, I understand the testimony was that all these birds were big, and shiny, and plump, and I gave my opinion on the basis of that.

Q But, you have no other than the assumptions that they had these three things exactly the same? You based your opinion just on those three assumptions?

A. I based my opinion on the condition the birds were housed, and I really don't care whether the program was the same or changed. If the program produced this kind of chicken, that is consistent with the facts that if it goes on high energy feed, it might get too fat. That is it. I don't care how it got there.

Q That is true if that program produces that, but you don't know what kind of bird the other program produced, do you?

A. I will help you out. Tell me the other birds were raised on a restricted program, and I will say it won't happen.

Q We don't have to help you out.

A. I said, I am helping you out.

Q That is up to the plaintiff to prove [illegible].

A. Well?

Q Do you know whether or not they were fed and grown under the same feeding program?

A. No.

Q And, your answer to that assumption question was based

upon the fact that they were, is that correct?

A. No. My answer to the question was based on the fact you wind up with a certain kind of a chicken.

Q No matter how it was grown?

A. I don't care how it is grown. I just want to know what it weighs and looks like.

THE COURT. We'll take our afternoon recess at this time.

(Court recessed from 3:05 - 3:30 p.m.)

(DOCTOR HOFFMAN resumed the stand for further recross examination.)

Q (By Mr. Divoll) If I understand your testimony, Doctor Hoffman, that if a pullet going into the laying house is plump and beautiful with good color and bright colored comb, that it is too fat?

A. I don't know as I would say it is too fat, I would say it is in a high state of condition.

Q And that if it is in that condition, that it is caused by an over consumption of energy?

A. Yes.

Q And, that that is the feed grower's responsibility to check these birds and weigh them, and to make sure that they are controlled fed so that they don't eat too much, that their lighting is controlled, that their water is controlled, and, in other words, they take over the physical management

* * *

Q How about the brown egg birds?

A. I don't see the brown egg birds on here, Mr. Cleary.

Q But for the white egg birds, one or two per cent?

A. I don't think it makes a distinction. I think it says neither white or brown. It just says, "Weekly Production." If you will point out the difference.

Q I don't see any, no.

MR. CLEARY. Your Honor, we offer, at this time, Plaintiff's "80," as well as "3," "4," "10," "12," "16," "18," "20," and "30" in connection with Doctor Hoffman's testimony. I think I did indicate Plaintiff's "80" as well.

MR. DIVOLL. May we inquire, your Honor?

THE COURT. Yes.

Q (By Mr. Divoll) Doctor Hoffman, I show you Plaintiff's "80" which is the Ralston Purina Chart. If you are acquainted with these, I think you probably know that the date of issue was some times on the chart in small letters If you know that, can you determine from an examination what the date of issue of that chart was?

A. Looks like February of 1965.

MR. DIVOLL. We have no objection to the first ones.

THE COURT. All right; Plaintiff's "12" is already admitted.

* * *

were not grown the same, wasn't there?

A. Are you saying the birds were restricted before, because I am saying if they weren't restricted, they were grown the same.

Q I am only saying you heard anything in court to indicate the birds were not grown the same?

A. I didn't, because a trade name means nothing to me. If you will describe to me how the program differs, I might agree with you, but a trade name doesn't mean anything to me.

Q Well, it indicated that Mr. LeRiche couldn't possibly have grown under the L.C. Program in September of 1970, didn't it?

A. It meant he could have raised fat chickens no matter what the program, and I am talking about housing over fat chickens, and I don't care what you call it. Tell me it was restricted feed, and I will understand.

Q There was evidence here the birds were not grown the same.

A. No, sir.

Q Now, as a feed manufacturer, and all your associations with the poultry industry, hasn't the main purpose been to secure a satisfied customer?

A. Yes.

Q And, if you found a customer that was completely satisfied, what further could you do?

* * *

eggs. We'll allow that. I think, as I understand it, the eggs were delivered to him, and he paid a price delivered to him, so I find it very difficult to understand that there will be any incidental damages, but I don't know that, but you are certainly entitled to show that.

MR. DAVIS. In that connection, as I understand the evidence, the shrinkage factor is substantially higher where you are freighting in eggs, bringing eggs in by freight and handling in the processing room and reshipping them, you have more breakage.

THE COURT. You are certainly entitled to show that, but I am going to confine it to those areas, at the present time.

(Discussion off the record and end of offer of damages in chambers.)

(In full court at 10:10 a.m.)

THE COURT. Proceed, Mr. Cleary.

MR. CLEARY. Thank you, your Honor. We recall Mrs. Jeannine LeRiche.

JEANNINE LERICHE, recalled to the stand as a witness for the plaintiff, for further direct examination.)

Q (By Mr. Cleary) You realize you are still under oath?

A. Yes.

Q In an effort to simplify things, now that we are getting back into that area of much complication and many, many

figures, I am going to leave with you your records, the vast majority, which have already been marked for identification. Those few that have not, we'll mark as you get to them. Now, let me ask you this first, Mrs. LeRiche, did you consult your records to determine what your actual egg production was from the various flocks in question, and when I say "flocks in question," I mean those flocks which you are making a claim for, because of loss in production? Did you refer to your records?

A. Yes, I did.

Q Were the records that you referred to, records which you maintained in the normal course of your business operation?

A. Right.

Q Tell the Court and Jury what you did to arrive at an expected number of eggs by dozens--always have reference to dozen--how you computed the number of dozen that you expected to receive from the brown birds, let's say, and then from the white birds.

A. Well, we did it the same way except it was for brown and white. We took the chart and we have reached out per peak.

Q Why twenty-eight days?

A. Just to give us a period, I mean.

Q Is the chart set up---

A. Yes, it is set up per week for, we average, four weeks.

Q Then what did you do?

A. Once we get the average of the chart, we had to multiply it by 28 days, and then that give us the expected eggs per bird housed, per month.

Q Now when you say "per bird housed," how is that generally referred to?

A. Well, we took as we went along, we took the mortality and deducted it as we went along month-to-month.

Q Is that what is known as a "hen day average"?

A. I think so.

Q So you computed the number of eggs per bird that you expected to receive based on the chart?

A. Right.

Q For each period of the chart?

A. Right.

Q Then you multiplied that by twenty-eight?

A. Right.

Q Then what did you do?

A. Then we took the expected eggs per bird housed per month, we took the amount we had, and so once we had the mortality deducted, we took, first we took it on the brown bird and then that give us the amount of eggs that we should have had.

Q Okay, and then what did you do?

A. Then we went all over my sheets and took what I really

had; I mean, had of eggs.

Q For egg production?

A. Right.

Q How are your sheets broken down?

A. Per week. So, we took four of these weeks to arrive at the same thing as on the chart.

Q Same twenty-eight day period?

A. Right.

Q And, that gave you a figure?

A. Yes.

Q What does that figure represent in each four-week period, the figure you got from the rest of your records?

A. Well, the eggs that we had.

Q The eggs you actually had?

A. Yes, compared to the eggs that we should have had.

Q For example, I show you now what has been marked Plaintiff's Exhibit "29" and with reference to Flock A-1, explain to me, if you will, how your records are set up so you can determine in any given twenty-eight day period the number of eggs that you actually received from the chickens that were alive in that flock? (A document was handed to the witness)

A. Every time the hired men come back from the hen house every night, or whatever time we run the barn or homosote, we give them a small card and then bring it to the office,

and the complex, the men have a yellow, small yellow pad that he writes all the eggs on them and every night when he goes by the office, he give it to me. Then every Monday night, what I had, I add it up and put it per week; that is the end of my week.

Q I think you testified earlier on direct examination that some Mondays there might be more slips in your hand to make a note of?

A. Right. Well, at that time, I wasn't concerned with that as long as I had the total amount of eggs after the batch, after we raised Lot Number 1, a special batch of white eggs, or brown eggs; as long as I had the total amount of eggs, that is all I wanted.

Q The chart then, I take it, breaks down for your figures on your counting sheets break down on a weekly basis the number of eggs that each flock actually produced in each month, or each twenty-eight day period?

A. Right.

Q Okay, going back to your chart where you computed your loss, what did you compare the expected--strike that. You compared the expected production with what you actually got?

A. Right.

Q And, what did that give you?

A. Well, you want me to read all those numbers?

Q No, just generally what kind of a figure did it give you?

A. It give between anticipated production and actual production. I don't think I figured it just per schedule, or something like that.

Q Did you come up with a certain number of eggs lost in each four-week period?

A. Yes. What I should have had was a lot higher than what we really had; right.

Q And, that figure is shown on your charts?

A. Yes.

MR. CLEARY. Your Honor, at this time we would have two additional exhibits marked, and I would indicate to the Court, at this point, we anticiapte reducing both of them to chart form so they can be, if admitted, readily reviewable by the Jury.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibits "81" and "82" for identification are production and loss figure charts.

Q (By Mr. Cleary) Calling your attention to Plaintiff's "81," Mrs. LeRiche, and particularly to Flock A-1, I see four rows of figures, is that correct?

A. Right.

Q And, I notice with respect to Flocks A-1, A-2, B-1, B-2, C-1 for a first and a second period, C-2, and the so-called Dostie Farm in Maine, there are the same four lines?

A. Yes.

Q Would you tell us, just generally, what each of the four lines is?

A. Well, one is the dozen expected, what we took out of the chart, and then the dozen that I actually received; then the third line would be the loss in dozen and the fourth line is the flock's population mortality.

Q That is the number of birds still alive?

A. After each month.

Q Now, how did you go about computing the number of actual dozens of eggs that you lost in any given one month period?

A. Well, the dozen expected minus the dozen I had which gives me the dozen I lost that we didn't have.

Q Did you take into consideration the number of eggs that you went into the market and bought to replace these eggs that you lost?

A. We did after, but not on this chart.

Q Okay, that is another chart. How did you break that down?

A. First, we went all through the slips that we had bought the eggs month for month, and then we have reached the total price that we paid by the dozen of eggs that we bought, and that give us an average price for that month.

Q And, for what years did you do that?

A. '71, '72 and part of '73.

Q Is that period of time during which the flocks existed on which there is a claim pending for loss of production?

A. Yes, this is.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibit "83" for identification, figures of egg purchased for 1971, and Plaintiff's Exhibit "84" for identification, eggs purchased for the year 1973; Plaintiff's Exhibit "85" for identification, eggs purchased for the year 1972.

Q (By Mr. Cleary) Now, Mrs. LeRiche, with respect to Plaintiff's "83" which apparently--by the way, would you identify that for us? (Handed to the witness)

A. Right. This is all the eggs purchased per month. We add the total amount that we paid and we'll divide the total amount of dozen that we had, and that would give us an average for the month.

Q So, Plaintiff's "83" shows the average amount, or price, that you paid---

A. In '71.

Q For the substitute eggs?

A. Right, for the eggs we had to buy.

Q Now, actually, isn't it a fact that you bought more eggs in the market than merely just enough eggs to cover the losses on the flocks?

A. Yes.

Q Why was that?

A. Well, some of the eggs that we were buying--first of all, we had a lot of shrinkage. We had to have more.

Q What do you mean by "shrinkage"?

A. Well, like when we were coming way up to Minnesota, where ever they were coming, lots of eggs were cracked or some of them would be some seed eggs; that is, the quality inside, and those eggs we can't sell, so we pass them to the breakage plant.

Q And, they weren't sold as table eggs?

A. No, we can't; if you want to keep your customers, you can't sell that.

Q Plaintiff's "84," tell us what these are. (Handed to the witness)

A. Same thing for '73, and here we got just up to June. That is the amount of dozen of eggs we bought in '73, plus the price we pay, and that gives us the average price we pay per month.

Q Per dozen, per month?

A. Per dozen, per month.

Q Again, Plaintiff's "85"? (Handed to the witness)

A. The same, eggs bought in '72.

Q Now, what did you do at this point? As I understand it, you have a monthly number of dozens of eggs lost?

A. Right.

Q Per flock?

A. Yes.

Q Of the six or seven flocks we are talking about?

A. '71, '72 and part of '73, we took those dozen of eggs that we didn't have and multiply it by the price of the average price of the dozen that we had to buy, and that give us a figure.

Q Now, the price that you have computed in each month, January, February, March, et cetera, for '71 is the same for '72 and same for '73, did you go back and multiply that average price, your cost to go out and buy eggs per dozen times the number of dozen that you lost?

A. I think so.

Q And, did you do it in each month?

A. Each month.

Q That you lost?

A. Right.

Q Okay. For example, if you had lost eggs from the A Flock, let's say---

A. It was every twenty-eight days, every four weeks, and at the end of the month you get the period.

Q On Plaintiff's "87" for example, when did the A-1 birds start to lay? What is the first month of noted production?

A. I don't have that on here, Mr. Cleary.

Q For this first period?

A. You mean, January?

Q Right. What do you show there for a loss in dozens?

A. I can read it better here. (Indicating)

MR. DIVOLL. We object to this. I think the Court has our objections, but in order to preserve our rig[illegible], we feel that we should--this is one of those flocks at which no samples were taken from.

THE COURT. The Court understands, and we'll note your objection, and we'll overrule it at this time.

Q (By Mr. Cleary) Go ahead, Mrs. LeRiche, what did the records show for a loss of dozens of eggs in the first month period for the A-1 Flock?

A. It shows that we had a loss of---

Q What are your figures by way of eggs?

A. 1,428.

Q Now, that was in what month?

A. Probably January, the first month.

Q And, how would you then determine how much it cost you?

A. I can tell better by these sheets.

Q How can you determine how much it cost you to go out and buy 1,428?

A. That was in '71, so in '71 for January, we had we had paid for eggs we bought, averaged 37.92.

Q What did you then do with the figures that you found for the same period of time?

A. Multiply what we lost by the average price that we had to pay in that same month and year.

Q What did that give you?

A. That give us the amount of money that we didn't have that we should have had.

MR. CLEARY. Your Honor, at this time, in connection with Mrs. LeRiche's testimony, so that she can testify to the totals which have been abstracted from the records, we would offer Plaintiff's "82," "83," "84," "85," "81". I am sorry, "81" through "85," inclusive.

THE COURT. Any objection, Mr. Divoll?

MR. DIVOLL. I am sorry, but this is the first time we have seen them. We are trying to simulate it down so we can understand the testimony. No, we are not going to object to them.

THE COURT. Plaintiff's "81" through "85" are admitted.

(Plaintiff's Exhibits "81" through "85" were received in evidence.)

MR. DIVOLL. Of course, we reserve our right of cross examination.

THE COURT. Certainly.

Q (By Mr. Cleary) Now, Mrs. LeRiche, to save time, with respect to Plaintiff's "82" would you tell us what that is? (Handed to the witness)

A. Yes, this is all the period, thirteen of them, and the month we started here. The first period started April of '71.

Q What flock?

A. A-2, A-1 and B-1. A-1 start April, '71, and A-2, May, and B-1, January, '71.

Q How about B-2?

A. B-2, April of '72.

Q And C--- And, C-1, was there a second period?

A. Right, May, '72 and there is a C-2 beginning August, '72, and then Dostie, November, '71.

Q Would you tell the Court and Jury what the computed loss in dollars is first for A-1 during the period of time that A-1 was supposed to be laying eggs?

A. Per month, per period, or total?

Q Total for the whole period.

A. A-1 is $15,216.03.

Q And, A-2?

A. A-2 is $48,246.08.

Q B-1?

A. B-1, $30,430.61.

Q B-2?

A. B-2, $71,717.05.

Q For C-1, first period?

A. $45,567.29.

Q Second period?

A. $23,360.11.

Q For C-2?

A. $80,060.26.

Q And, what is the remaining?

A. Dostie, $22,167.31.

Q Can you tell us what the total of all those figures are?

A. $336,764.74.

Q That represents--

A. The loss that we had.

Q Based on the months you had to pay to replace the eggs you didn't get?

A. Right.

MR. CLEARY. Nothing further at this time, your Honor.

CROSS EXAMINATION

Q (By Mr. Divoll) You worked hard last night, didn't you, Mrs. LeRiche?

A. Very.

Q Just so we understand each other as to how you arrived at your figures, as I understand it, the charts that you work from which are an exhibit here, are divided into twenty-eight day periods?

A. Right.

Q And, you took your figures of production from each flock, and you took the normal curve in the chart and averaged what the averaged production expected on that particular twenty-eight day period was concerned?

A. Right, four weeks.

Q And, against that, you took your production records that you had and subtracted the two?

A. Right.

Q And, then you took your purchases of eggs by month and struck an average price for the eggs that you paid which you bought to make up for what you claim was your loss?

A. Yes.

Q And, then you multiplied that by the difference between your expected production and the production that you actually received?

A. You lost me somewhere. I think so.

Q I don't want to lose you, and I don't want to have you think so. We got down to where you had divided into 28-day periods your expected production and your actual production?

A. Right.

Q And, then we had divided by months over a certain period of time the price that you paid for eggs?

A. Yes.

Q And so you took the difference between the expected production and the actual production and multiplied by the price per month for the period that you were concerned with?

A. Average price, right.

Q Now, of course, there were what, seven flocks that you have

* * *

A. No, we don't grow birds in cages.

Q I am sorry, that was very poorly phrased. All these eggs were produced in cages?

A. Yes.

Q And, did you allow in your figures a percentage loss of eggs that were produced but which went through the bottom of the cage, or were ruined because of breakage or some other reason?

A. No, because when they are counted in the hen house, even if they are crushed, or if just the shell goes by, it will count anyway. You take the cracked eggs out of the washer.

Q I realize that, but if a hen lays an egg and in being laid it hits the wire and breaks and goes down through the wire into the pit, that is not counted, is it?

A. I never saw that before.

Q You never saw that?

A. No.

Q You don't feel there is an expected industry loss of broken eggs and unretrievable eggs?

A. From the cages?

Q From the bird cages.

A. Not that I know of; from the washer when you start grading them and washing them, there is a loss there, but that is the only one I know.

* * *

Q But you say you did not take away any figure for the shrinkage?

A. No.

Q I thought you had, and I was trying to arrive, or reach how you arrived at that.

A. I am sorry.

Q Now, Mrs. LeRiche, so that I can adjust my notes here in reference to the different flocks, I have handed you the production charts on all the flocks that are in question here?

A. Yes.

Q Now, what is the first?

A. Complex "A", one row of brown bird.

Q Complex "A"?

A. Right. It was just one row we had in that building, brown birds, 6,500 brown birds.

Q You have a designation number in your records?

A. A-1, I believe.

Q Exhibit Number "4," Plaintiff's Number "4" refers to Flock A-1?

A. A-1.

Q And, can you tell from that record when they were hatched?

A. Well, not from this one. If you go back twenty weeks; they were housed April 5th of '71. I would have to go back to my green sheets.

Q Can you remember? There is some conflicting testimony about the program these birds were brought up on.

A. No, I would have to go back to another book, to my purchase, I guess, at home, if you want to know when they were raised, but it would be twenty weeks before April 5th.

Q Twenty weeks before?

A. That would have been when they brought them to us as baby chicks.

Q Twenty weeks, this is on Exhibit "4," Flock A-1?

A. Right.

Q They were housed April 5, 1971, and hatched---

A. Twenty weeks earlier.

Q What is the next exhibit that you have there?

A. We have Complex "B", 1971 through '72.

Q What exhibit is that?

A. Twelve.

Q Do you have when they were hatched?

A. Yes, I do have it here, November 27th and November 30th.

Q And, they were housed?

A. Housed on April 17, 1972.

Q April 17th?

A. Right.

Q All right. Now go to the next chart.

A. Complex "C", '71 to '72.

Q Complex "C". What exhibit is that?

A. Eighteen.

Q And, can you give me when they were hatched?

A. Well, that would be twenty weeks before twenty-one to twenty-seven, 1971; twenty-eight.

Q Would that be what we call the flock in C-1?

A. Right.

Q And, they were housed?

A. January 21 through 28; at the end of '71.

Q And, twenty weeks earlier would be when they hatched?

A. Right, when they brought them to us as baby chicks.

Q Go to the next one.

A. Complex "A".

Q What is the number?

A. A-2.

Q Exhibit number?

A. Three.

Q Plaintiff's "3"?

A. Right.

Q This is Flock A-2?

A. Right.

Q And, when was it housed?

A. May 31, 1971.

Q And, I guess you have twenty weeks earlier?

A. Right, or twenty-one, whatever it is.

Q And, that is Exhibit "3"?

A. Right.

Q Go to the next one, please.

A. White birds, new Complex "B". Here, I put it down that is B-1 and B-2.

Q That is Number "10"?

A. Exhibit "10," right.

Q When were they housed?

A. Twenty weeks old, July 10th to August 4th. Some time I put down two days because when they send us a big amount like 32,000 birds, you have to divide it by two shipment.

Q When were they hatched, do you show that?

A. Right. March 20, 1971 and February 20, 1970.

Q Now, in connection with the next one please, what number is that?

A. Complex "A" on Plaintiff's Exhibit Number "2".

Q That is Complex "A"?

A. Right.

Q And, what is the flock number?

A. A-3.

Q When were they hatched, if you have it?

A. No, I don't have it, but they start laying at 22 weeks, July 14th of '72, so it would be 22 weeks before July 14th of '72.

Q If I have studied my papers correctly, isn't this a flock that you had grown earlier and that is in there as really

the second time around for this flock?

A. All right. Well, I think so. I don't know, I would have to recheck.

Q Let's be correct on it.

A. Right, this is the flock that was molted; right, that would have been.

MR. CLEARY. Your Honor, if we can interrupt; for the record, I think we indicated to Brother Divoll because of the difficulty of proof of damages, that is not the one I am thinking of. We are not making a claim for any flocks that was molted.

MR. DIVOLL. Does that include the one covered by this Exhibit Number "2"?

MR. CLEARY. What flock is marked on that, Mrs. LeRiche?

MRS. LERICHE. Complex "A", A-3.

MR. CLEARY. There is no claim for that.

MR. DIVOLL. Okay.

MR. CLEARY. That is not admitted as an exhibit either, I don't believe.

THE COURT. Two is not admitted.

Q (By Mr. Divoll) Let's go on to the next one then.

A. Exhibit "16," Building "C".

Q Now, do you have a flock number on that?

A. C-2.

Q And, I think you have when they were hatched and housed?

A. Right, twenty weeks old, started February 9th to February 22nd of 1972.

Q When they were hatched?

A. Remember, when we received them as baby chicks.

Q When were they housed?

A. Twenty weeks old. I put down June 28th to July 11th, 1972.

Q Do you have a chart on the so-called Dostie flock?

A. No, I don't. Well, unless--no, we don't have it.

Q I show you now Plaintiff's "30". This is the chart on the Dostie flock? (Handed to the witness)

A. Right.

Q And, this is in Maine?

A. Yes.

Q And, can you tell us when they were hatched?

A. June 1, 1971.

Q And, when were they housed?

A. October 19th through October 28th, 1971.

Q Now with reference to the Dostie flock, do you remember where they were grown?

A. At Eldridge Farm.

Q At the Eldridge Farm, or the farm in Cabot?

A. I would have to go back on my papers. Probably, half and half because the Eldridge Farm wouldn't be big enough

* * *

took the figure so many birds, so many cages.

Q Do you have your chart that goes with Exhibit Number "31"?

A. Dostie "31"?

Q Yes.

A. That is what I was going by.

Q You show 38,323 birds?

A. Yes.

Q In October of 1971?

A. Right.

Q And, by January 23rd it had dropped to 35,695 birds, is that correct?

A. Right.

Q Is it fair to say that in the first period of their laying life that there was an extremely high mortality in the Dostie flock?

A. I would have to figure that. I don't know just by looking at that.

It shows a drop?

A. Yes, but you have almost 40,000 birds, so you have to expect some mortality there.

But this is 3,000 birds in about two months, isn't it?

A. You take January 29th? Which date did you take?

January 29, 1972.

A. Right, we had 35,695.

And, actually, next to these figures don't you give the

mortality rate? Aren't these little figures alongside the numbers that died? (Indicating)

A. Right.

Q And, how many do you show died in October of 1971?

A. October, '71, 127.

Q Now in November of 1971, how many?

A. Well, I don't remember just when we moved them; October, that might have been just for a week.

Q What do you show?

A. One hundred twenty-seven, but I don't know for how long. It might have been just one week.

Q The next figure you have on the line is November 24th?

A. Right, at the end of November, I would have lost 883 birds.

Q And, at the end, is that the number you would have lost, or the number you lost that month?

A. That I lost that month.

Q How about in December?

A. 833 birds.

Q And, in January?

A. 912 birds.

Q Now, skip down to, let's say, the month of May. How many birds did you lose in May?

A. Three hundred seventy-two.

Q And, In July?

* * *

for information involving specific questions they have. So I was involved on several occasions with the operation.

Q Have you had an opportunity to review the management aspects of the operation in the complex?

A. Somewhat, yes.

Q Over what period of time would that have been?

A. Since it was established.

Q Since 1970?

A. Yes.

Q Do you also get around to other areas to view the management situation at other poultry farms or houses?

A. Yes.

Q Based on your background and your education and experience in this field, do you have an opinion as to the quality of the management at the Vermont Food Industries complex and I speak specifically now of the "A," "B," and "C" Buildings as you saw them since their construction?

A. Yes. I feel the management is good at that particular facility.

Q Have you had an opportunity to inspect the so-called homosote building?

A. I haven't been in the homosote building since it was originally set up. I believe I worked with Mr. LeRiche in designing the ventilation system for that building.

Q How does the ventilation system in that building compare

with the ventilation system in the new buildings?

A. We set it up using the same criteria as far as air unit per bird.

Q I show you Plaintiff's "63" for identification and ask if you can identify that for us? (Handed to the witness)

Q A. Yes, this is the 1972-1973 POULTRY MANAGEMENT AND BUSINESS ANALYSIS MANUAL that all of the extension poultrymen in New England get together and publish. We simulate information for this and put it out every two years.

Q With specific reference to Page 11 which has been previously refered to---

MR. CLEARY. Your Honor, let me just check quickly with the Clerk. As I assuming this is only marked for identification?

DEPUTY CLERK ATHERTON. Yes.

Q (By Mr. Cleary) With respect to Page 11, are you familiar with the bases for the production figures that are there, the expectation figures?

A. Yes.

Q And, are you also familiar with the production charts that are in front of you, and on which there has been testimony here this morning?

A. Yes.

Q Were you here when Mrs. LeRiche testified about the production charts?

* * *

production figures expected on a monthly basis, or four week period, 28 days period, and projected the number of eggs that would have been laid during this period, and compared this with what she actually got and applied an average price for that same weekly period throughout the laying cycle and came up with an average price for the four week period, or twenty-eight day period, and thus obtained a loss figure.

Q Based on your knowledge of production charts and the production goals that are recommended in those charts, and the method and manner in which Mrs. LeRiche computed it, as you heard it, do you have an opinion as to whether or not that method of computation is a fair and reasonable one for ascertaining the amount of loss of a flock production?

A. I believe this would be a good way of getting at the problem, yes.

Q Were you familiar, Mr. Mercia, with the action taken by the Ralston Purina Company in notifying the accounts of Vermont Food Industries they were not to continue to send any money for the eggs they received from Vermont Food Industries?

A. I had been informed of this, yes, by Mr. LeRiche.

Q And, do you have any first hand observations as to what effect that tactic, or practice, had on Mr. LeRiche's

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rearing period could be expected to delay sexual maturity; that is, delay the time, the age at which the hen would lay its first egg. This would tend to increase the size of the eggs as the hen came into production. We tended to get a slightly higher mortality in the rearing period on occasions, a slightly lower mortality in the laying house, and on some occasions we got a greater egg production; that this was not a consistent effect from the restricting of feed during the rearing period.

Q Now, did you make a recommendation in respect to controlled feeding at the present time?

A. At the present time we do not recommend a controlled feeding program for raising pullets for egg laying purposes. We consider that the major benefit of restricted feeding is to delay sexual maturity, and that can be accomplished through lighting programs, for example, perhaps with less difficulty.

Q Now in your experience there in New York State, what percentage of growers of laying pullets would you estimate were now using a controlled feeding program?

A. I can't name a grower at the moment who is using a restricted feeding program for raising pullets.

Q When you say you can't name, what range of numbers are you considering?

A. Well, I can't give you the number of how many poultry-

men are in New York State right now, but of the meetings I have been at recently, and the people I have come in contact with, I would definitely assume that restricted feeding of pullets was not a very common practice in New York State at the moment.

Q Now, what about the management problem of controlled feeding?

A. Well, of course, this is one of the difficulties. One of the reasons for hesitating to recommend the use of restricted feeding is that it does require close attention to management to make sure that, first of all, the restriction is sufficient to have the effect that you wish to so have, and, secondly, that the restriction is not so severe one could cause difficulties with the flocks.

Q Are there other affects from this restricted feeding?

A. Other effects, other than what?

Q You said it delayed sexual maturity. Does it increase the prevalence to disease?

A. One of the reasons we have been hesitant in recommending restricted feeding is that the experiments we have had in our own experiments, when there was too much feed restriction, we found these birds were hit harder when disease did hit in the flocks. I can remember particularly a case where a coccidiosis outbreak occurred in the restricted feeding programs, those most restricted in this

case to 70 per cent of feed intake or volume feed intake. These had much higher mortality than either full fed, or those that were restricted less.

Q And, do you ever recommend it at this time?

A. We recommend restricted feeding for the rearing of broiler breeders; those that are going to be used for the production of broiler chicks, but not made a general recommendation for restricted feeding of egg laying strain stocks.

Q Now in conjunction with your controlled feeding, did you also make experiments in reference to controlled lighting?

A. I, personally, have not made those experiments, but my colleagues have made such experiments.

Q They are in the department there with you?

A. Yes.

Q Are you familiar with those experiments?

A. Yes, I am.

Q Are you familiar with the results?

A. Yes. Yes, I am.

Q And, based upon your familiarity, do you make recommendations in your work to people in the field with respect to the lighting program?

A. We recommend that a lighting program be established, or be followed, in the rearing of pullets. That will not cause them to come into production at a too early age.

We recommend some attention be given to lighting programs in the rearing period.

Q Is there some reason for that?

A. Well, the lighting program has a substantial effect upon the laying hen if a growing pullet. It is supposed to increase day length, increase length of day such as a bird is exposed to [illegible] in the spring. This will tend to stimulate the sexual development of the bird, and a pullet that is reared under conditions of increasing day length is likely to come into production at an earlier age than if she were not raised under those conditions. On the other hand, in a pullet exposed to decreasing day length such as you find in the fall of the year, then sexual maturity tends to be delayed, and, of course, laying hens when they come into the laying house have to be given a simulated, with increasing amounts of light and at no time during the laying year do you want to have a decreased amount of light given to the laying hen.

Q In reference to effecting this lighting program and to the controlled feeding for as much as you recommend, what is the obligation of management?

A. By "management," you mean the person caring for the birds?

Q Yes.

A. Yes. Well, this is one of the management functions in

managing a flock is to manage the light. I would consider this a management function.

Q Now I want to switch to another field, fatty liver syndrome. Have you ever heard of it?

A. Yes, I have heard of fatty liver syndrome.

Q Can you tell us what it is, or describe it, as you understand it?

A. Well, fatty liver syndrome is a rather ill-defined term. It has been used by a number of people to describe a condition whereby a laying hen is found to have a liver which is usually pale, rather friable, or rather brittle when you handle it. It may have hemorrhage in the liver. The hen, itself, may be somewhat obese, there may be mortality due to liver hemorrhage. These are all things that have been discussed in conjunction with fatty liver syndrome by various people. Exactly what a person considers fatty liver syndrome, I think, varies a great deal from individual to individual, some times.

Q Now, do you consider it a specific disease?

A. No, I don't really consider it a specific disease. The closest that I consider to something specific is the condition where you will have mortality in a laying flock from a massive hemorrhage from the liver in a laying hen. Now, normally, this liver is a fatty liver from which this hemorrhage occurs. This is when I consider there is a

problem of a fatty liver nature; that is kind of what I consider a rather specific case.

Q Now, supposing that there was fat in the body cavity of a bird, a chicken. In your opinion, would this be, or would you determine this a fatty liver syndrome?

A. Well, there is always fat in the body cavity of a chicken. This is a normal occurrence in the laying hen is to find fat in the body cavity.

Q Would the amount of fat make a difference to you whether it became a fatty liver syndrome or not?

A. It is very difficult to say what is a normal amount of fat in the body cavity of a laying hen, and the mere indication that the liver was pale and appeared fatty, and that there was a lot of fat in the body cavity of the laying hen, to me, doesn't necessarily indicate this is something I would consider fatty liver syndrome.

Q Would the degree of fat there be important to you?

A. Well, in a sense. I mean, one can find birds that are very fat. Then you usually find they also have a fair amount of fat in the liver. This is a fairly good correlation between liver fat and body fat, but it is very difficult for me to indicate when the level of body fat is likely to cause trouble in a laying hen. I haven't got a vision in my mind that says this is troublesome, and this is not.

Q What is the history of fatty liver syndrome?

* * *

A. Well, of course, the energy level contained in a formula will depend upon the economic considerations of the prices of various ingredients, but it has been my experience in this part of the United States that the normal energy levels to find in rations for laying hens, run to 1250 to 1350 calories of metabolized energy per pound.

Q And, in the formulas that you have devised, is this the range that you seek to establish?

A. This is the normal range that we find to be the economic range of formulas under most ingredient price considerations.

Q Would you expect to find fatty liver syndrome in birds that were fed this formula?

A. One can find instances of reports of fatty liver problems, and our own flocks at Cornell, we find instances of mortality from liver hemorrhage, but the diets we feed are within that range, but on the other hand, I don't feel that this is a causative nature of the problem.

Q Now, you have had problems of fatty liver syndrome come to your attention there in conjunction with your work. What is your recommendation when this problem comes up?

A. Well, fatty liver syndrome, when someone brings this to my attention, and it is usually in a situation where we are having problems of mortality in the flocks, and

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fat there was in the liver of a hen and how much, or how many eggs she would lay.

Q Well, did you reach some conclusion as to the existence of fatty liver syndrome and its effect upon the production of the hen?

A. We haven't been able to correlate the liver fat content. We haven't been able to show any relationship between the liver fat content and the egg production rate in a flock. This is a conclusion I get; we have reached.

Q In every day language, would it be fair to say that if birds are fat, you haven't found it has affected their production?

A. Well, the experiences we have had is that we had one experiment, I can cite---this is probably the best way of answering your question---where we had birds at the end of the laying year were extremely fat with high levels of fat in the liver, We had no mortality in the flock of any appreciable nature. We looked at the relationship between the fat content of an individual hen's liver at the end of the experiment and how many eggs she had laid the previous 6 or 8 weeks prior to when we killed the bird, and we couldn't find any relationship between how fat the liver was and how many eggs that she laid. We have come to the conclusion that just a fatty liver, per se, is not necessarily a sign of pathology, or

a sign of something that is wrong with the hen.

Q Have you come to the conclusion whether or not fatty liver, per se, means that is the cause of poor production?

A. Yes. I don't think you can come to any conclusion that it is. It isn't necessarily a cause of poor production.

Q And, this is as a result of the experiments you have conducted?

A. Yes.

Q Now, I show you Defendant's "F" and "G" marked for identification and ask if you would tell us what they are?

(Handed to the witness)

A. I have two papers here that are reprinted from the JOURNAL OF POULTRY SCIENCE, one of them January, 1973, entitled, "Factors Influencing the Liver Fat Content of Laying Hens" by V.A. Ivy and myself. This is a paper we published that dealt with some of our experiments in this area. The other paper I have is, "The Effect of Choline Supplementation of Diets for Growing Pullets and Laying Hens." This is authored by myself and three colleagues. It is a reprint from POULTRY SCIENCE, May of 1971, and this describes other experiments that we did in which we looked at the fat content of the liver of a laying hen.

Q Is the information contained in those pamphlets the same

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I have seen similar charts.

Q Would you look those over. (The witness examined the documents.) Have you examined those?

A. Yes.

Q Assuming each of these charts accurately represents the production of a flock of birds, and that you have never seen the birds, that you had heard that the birds went into the laying house looking bright, beautiful and plump, that you knew nothing about the feeding program before they went into the laying house, that the birds were disease free, and that the management was good, could you give an opinion that the production problem in the flocks represented by each of these charts was caused by fatty liver syndrome?

A. On the basis of that information, I couldn't give that opinion.

Q And, from your experience as a nutritionist and your experience in the field, would it be reasonable to give such an opinion based on these assumptions?

A. I think it would be highly speculative.

Q Would you look particularly at Plaintiff's "18" and Plaintiff's "10"?

A. Yes, I have them.

Q Now, Plaintiff's "10" applies to a flock we call B-1 and Plaintiff's "18" refers to a flock called Complex C-1.

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recommendations, preparing recommendations for nutritional use of nutritional information, working with our extension people in the department, and helping them with problems that they have in extension.

Q But as far as actually going out into the so-called field; that is, out into the various producers' buildings and working in those, you don't do that?

A. Yes, I get into producers' buildings. I don't do this as a major portion of my time, but I go into chicken houses, yes.

Q But that would be a very small part of your time, is that a fair statement?

A. Yes, that would be a fair statement.

Q And, in connection with the work that you have done in the field of what you described as a fatty liver syndrome, Doctor, that is work that you have done at the university?

A. Yes, done at the university in our experimental flocks.

Q By the way, Doctor, am I correct that your definition of a "fatty liver syndrome" includes a hemorrhage of the liver?

A. This is the one I think causes problems, yes.

Q Are you aware of the fact that other people who are specialized like yourself, have a different definition than that?

A. Well, I think there are other people that have included the hemorrhage as part of the definition, although I think

more recently, like Polin at Michigan State, call this condition a fatty liver hemorrhagic syndrome, as I suggested several years ago.

Q Well, are you aware of the fact that other of your colleagues do not require within that syndrome the existence of a hemorrhagic condition of the liver?

A. Yes, I know there are many people that consider fatty liver syndrome to be part of a complex where you have fat liver, a liver that is fat.

Q But not hemorrhaging?

A. That is right.

Q So as I understand it, and I would like you to correct me if I misstate this, it is your definition of fatty liver syndrome as one in which the liver has hemorrhage, is that correct?

A. Yes. The reason for this is that this is the one thing you can point to about the condition that is detrimental to the animal. It dies from the hemorrhage, and, therefore, it is in bad condition.

Q If you follow that one step further, Doctor, are you saying you don't consider fatty liver syndrome unless there is a mortality involved? Let me waive that. You don't consider that this so-called condition that various witnesses have described as fatty liver syndrome exists unless there is some mortality associated with it, is that correct?

A. In my experience this is the one thing that you can point to about fatty liver problems that causes difficulty in the flock mortality that you get.

Q Well, you would agree, I am sure, Doctor, that you can have difficulty in a flock without mortality if you have a high obesity condition throughout the flock?

A. Well, I am not sure what the relationship is between obesity and problems in the flock.

Q Well, haven't you stated, Doctor, in some of your writings in the past it is a known fact that the birds that are obese tend to produce eggs at a lower rate; it tends to affect their production?

A. I am not sure I have indicated this very much in my writings. I think I have indicated that the fatty liver syndrome is probably part of the problem of obesity in a flock.

Q I am not referring to fatty liver syndrome now, Doctor. I am just asking you if you haven't stated in your writings that, in your opinion, a bird who gets overweight tends to produce at a lower rate than one that doesn't?

A. I think, trying to remember a specific instance where I have written on this subject, maybe you are going to find one for me, but as I recall, I have stated this certainly in the case of broiler breeders. In our textbook, NUTRITION OF THE CHICKEN, we indicate it is necessary, or

recommend the limitation of feed to give to broiler breeders to keep them from becoming overweight, to be able to maintain egg production in these broiler breeders at a level we would like to see it. In terms of egg production strains of birds, we haven't got much evidence as to what the affect of obesity in this flock is necessarily going to have on egg production, and my own experiments in this regard have indicated, at least, I have instances where I can quote where I have a flock that is very fat, but that the production rate is very good.

Q That experiment involved a sampling of how many birds, Doctor?

A. In this case, we sampled at the end of the experiment, we sampled ten birds from six different treatments, so there were 60 birds total.

Q Over a period of six weeks, would that be a correct statement?

A. We sampled them at all the same time.

Q Yes, but for the last six weeks you kept track of their production?

A. We kept track of the production for the entire year, but correlated their production over the last six weeks with the liver fat content.

Q All right, so from a result of that testing of ten birds, you reached the opinion that you have given us, is that

correct?

A. Well, we tested 60 birds because we had 6 different treatments that we looked at in this experiment. The treatment that the dietary treatment we gave had no significant effect on any of the liver fat values obtained. So we actually did the correlations from the 60 birds, rather than just ten.

Q Doctor, perhaps we can get at this in another way. Do you have some opinion as to whether or not there is any importance in terms of balancing the diet of a laying chicken, a laying hen?

A. In terms of what?

Q In terms of the diet? Does the diet have to be balanced, in your judgment?

A. If you define a balanced diet that the diethas to have the proper nutrients in it and the proper proportion, yes, I would agree you should have a balanced diet.

Q Doctor, when you are speaking about a balanced diet, are you including in that term, "nutrients," such matters as proteins, amino acid level, minerals, vitamins and the energy level?

A. Yes, I am.

Q And, is it a fact, Doctor, that it is of the utmost importance to, in terms of the feed that is being furnished to a flock, to make sure that this diet is properly

balanced?

A. Yes. Yes, this is right.

Q And, haven't you found, Doctor, that there must be a constant ratio of all the essential nutrients in the diet to the total calories in the feed?

A. I wouldn't necessarily say in the case of a laying hen we have to have a constant ratio. What we have to be concerned about in a laying hen is that in the food that the hen consumes, that she is consuming the nutrients that she requires to produce an egg, and maintain her body functions. Now this doesn't necessarily mean it is a constant ratio to energy in the diet.

Q Doctor, look at a page which I took the liberty of photostating from your book on chicken nutrition. First, I will have this marked.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibit "88" for identification is a page.

Q (By Mr. Davis) I don't suppose you have looked at this book recently, Doctor. Is that a fair statement?

A. No, I don't think that is right.

Q Or have you looked at it recently? I would like to call your attention, Doctor to the sentence, "The chicken can use high levels of fat as a source of energy provided that the diet is formulated to supply a constant ratio of all nutrients to total calories." Is that a correct

statement, in your opinion?

A. Yes, I would say that is a correct statement.

Q Now, what in your opinion, Doctor, happens if this is not done; that is, if we don't have the constant ratio of all nutrients to total calories?

A. The basic reason why you make that statement is that, as a general rule, you can say that a chicken will consume the amount of feed that it requires to take in a given number of calories of metabolizing energy per day, so growing chickens don't do quite a good job of this as laying hens. So, if you have a diet that is very high in energy so that the daily intake in terms of grams of that diet is relatively low to take in the total number of calories the animal needs, then within that amount of feed you have to have the amino acids, vitamins, minerals, and all the other nutrients that are required in the amount of feed that the animal consumes. Now if the diet is lower in energy so more of the diet has to be consumed to get this total daily intake of energy, then a different amount per unit of diet of amino acids, of vitamins and minerals and so forth are required.

Q Is it a correct statement, Doctor, that the higher the energy level in the diet, the fatter the bird gets, and the lower the energy in the diet, the leaner it gets?

A. Well, I think you have to qualify that statement some-

what, because in the case of a growing chicken that has been, particularly when we are talking about a broiler chicken, this animal has less ability to regulate its energy intake, so it only takes in a constant caloric supply per day when fed rations of different energy level as does an adult. So a broiler fed a ration very high in energy is likely to have a higher fat content of the carcass then is a growing chicken that is fed a lower energy diet. In the case of a laying hen, the hen has a much greater ability to make this regulation as an adult. Even as ourselves, we tend to regulate our food intake somewhat better, so we maintain body weight. So in the case of the laying hen, the high energy ration might be associated with somewhat greater body fat content, but it is not necessarily the case.

Q And, is it a correct statement, Doctor, that in the rearing of pullets it is necessary to adjust the energy content of the growing diet for the period from 8 weeks of age to 22 weeks of age in such a way that the pullets receive just enough metabolizing energy for normal growth development, after feathering, without excesses of dietary energy which can only be converted to fat?

A. This is important as far as their intake is concerned, yes.

Q And, is it not also a fact, Doctor, this is especially

important during the period when the birds are approaching maturity?

A. That is right.

Q And, when are birds approaching maturity, Doctor?

A. When about twenty to twenty-two weeks of age.

Q Is it a fact that most breeds of birds start into the laying cycle, so to speak, during that period; namely, from twenty to twenty-two weeks of age?

A. Yes, that is right.

Q And, you talked with us earlier, Doctor, you have to be careful about the lighting program to make sure they don't mature too early, is that right?

A. Yes.

Q What is too early?

A. If the lighting program is not properly done, you can have birds start to lay eggs at 18 and 19 weeks of age, and some times even earlier, rather than delaying them beyond 22 to 23 to 24 weeks of age.

Q Would you say that it is a proper maturity age for birds to start laying when they are in the age bracket of 20 to 22 weeks?

A. Twenty to twenty-two is a bit on the early side. We would like to see them held out, out of production, at least a little bit beyond 22 weeks.

Q Would 23 weeks be normal?

A. Yes. I can't give you an exact figure. It depends somewhat on the flocks' situation that they are being reared.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibit "89" for identification are copies of Pages 43 and 44.

Q (By Mr. Davis) I am showing you Pages 43 and 44, and I would like to have you look at the last paragraph which appears on the bottom of Page 43 and continues on Page 44. (Handed to the witness)

A. Yes.

Q Doctor, do you recognize that as being a photostatic copy of Pages 43 and 44 of your book entitled, NUTRITION OF THE CHICKEN?

A. Yes, I do.

Q Is that statement correct that appears in the last line on Page 44, "If pullets are allowed to become too fat, the layers of adipose tissue enveloping the vital organs may interfere with optimum egg production"?

A. Well, this is, of course, one of the reasons why in the case of broiler breeders one does try to control an obesity. I don't think I have any evidence that says that the layers of adipose tissue enveloping the vital organs may interfere with ovulation. I don't have any evidence on that.

Q Doctor, let me interrupt you, if I may. Isn't it a fact

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from people in the egg production business," it being this heavy obese bird situation that we have been talking about. Do you see that there, Doctor? (Indicating)

A. I see the question. Your question was, has it been reported outside the literature?

Q Yes.

A. Yes, I indicate in there. (Indicating)

Q Now, Doctor, would you be kind enough to read to us your answer in there, and I would like to ask you some questions about it.

A. Yes. The question was, "Has it been reported to you outside the literature from people in the egg production business?" I say, my answer was, "Well, there are reports of this condition that is known as fatty liver syndrome that are present in the literature. Many of these are, I would call anecdotal reports; that is, they are descriptions of field cases rather than what I would consider sound experimental studies, and these studies often have reported with them a situation where the flock was found to have excessively fatty livers and generally was obese, and that there was a reduction in egg production associated with the condition that was being described. But, for the most part, experimental studies and real sound evidence on this I have not seen, and so one of the reasons for our own studies on this way to try to develop any relationship

that there might be between obesity and egg production, per se."

Q So I take it, Doctor, that these field reports you talk about in that answer are the reports from people in the egg production business, is that a fair statement?

A. Yes.

Q And, those reports are to the effect when they get this obese condition, in some instances at least, that there is a reduction in egg production associated with it?

A. That is correct.

Q Now, what you are saying is that you did some experiments on some 60 birds, and you could not find any association or reason to just file that report from an experimental point of view, is that correct?

A. Well, I have to say we did, oh, more than 60 birds, because we have other experiments we have done in which we have looked at the relationship between liver fat and egg production.

Q Are you acquainted with Doctor Everett Bryant down at the University of Connecticut?

A. I am not acquainted with him personally. I know of Doctor Bryant.

Q So, I take it, you have never discussed this problem with him?

A. No, I have not.

* * *

although it probably needs some clarification in the context that it is in.

Q Before we get to the clarification, Doctor, may I just ask you, for the information of the Court and Jury, if you would read that portion of Pages 102 and 103 that we have just referred to between us?

A. Yes. This is under a paragraph which is headed, "Symptoms and signs of deficiencies of protein or essential amino acids. In growing chickens a mild, partial deficiency of protein or of one of the essential amino acids results only in decreased growth, in direct proportion to the degree of deficiency. Since protein level must be expressed in terms of the energy content of the diet, a protein deficiency may also be called an excess of energy. Thus, as indicated in Chapter 2 on energy, a protein deficiency causes an increased deposition of fat in the tissues due to the inability of the chicken to make productive use of the energy because the diet does not contain sufficient protein or amino acids for optimum growth or production. Thus, the animal must convert the extra energy into fat."

Q I am interested in the last part of that, Doctor, where you say, "Thus, the animal must convert the extra energy into fat." Will you explain that for us?

A. First, I would like to point out we are talking about growing chickens, and I probably, if I were writing this today, would word it slightly differently because of what

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having the intake of nutrients in the amount of feed that the hen consumes. We have to have a nutrient present.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibit "93" for identification is Page 75.

Q (By Mr. Davis) Calling your attention to Page 75, that is, again, a photostat copy of a page out of your book entitled NUTRITION OF THE CHICKEN, isn't it? (Handed to the witness)

A. That is correct.

Q I call your attention, Doctor, to the portion on Page 75 which talks about protein requirement of laying hens. Do you see that?

A. Yes, I see it.

Q Does that paragraph have to do with the laying White Leghorn hen?

A. It does.

Q Do you agree with the sentence that says, "However, numerous studies on the protein requirements of laying hens, representative results of which are presented in Table 3.8, indicate that for optimum production of about 75-80 per cent and for best efficiency of feed utilization with corn-soya laying diets, mature White Leghorn hens must consume about 17.5-18.5 grams of protein per day"?

A. At the time that was written, this was our recommendation. Today, which is four years later, we have modified

those recommendations.

Q To what extent, sir?

A. We have modified them, and we have done this in a meeting last summer, and done it at Cornell University Nutrition Conference this year, we are now recommending that the daily intake of protein for a hen that is in the early stages of production can be from fifteen to sixteen grams of protein per hen per day provided the amino acid balance in that level of protein, or in that amount of protein, is proper.

Q Where--why did you add that last part you can go down as low as fifteen to sixteen per cent provided the amino acid level is proper?

A. Well, a laying hen isn't very affected in making an egg. She only has to put 6 grams of protein into an egg, and yet she takes in 15 or 16 grams of protein to produce the egg, and one of the reasons that the hen has to consume more protein than she puts into the egg is the amino acids that are required to produce the egg have got to be in this protein in the proper amount in relation to the egg protein that she is making, and so if you can supply the amino acids in a diet in a ratio in such proper proportion that the egg protein can be made more favorable than the total amount of protein that is taken in, becomes relatively unimportant compared to the balance of

amino acids that the diet has got to have.

Q And, if it is not, Doctor, if the amino acids are not balanced, what is the net result in terms of your experience?

A. Well, if the amino acids are not balanced, what one normally talks about as far as laying hens, you have an amino acids deficiency; you don't have such amount of amino acids in the diet for the hen to make the most use of all the rest of the amino acids.

Q What happens? What are the symptoms of amino acid deficiency?

A. Well, there are several things that can happen. One is the hen, in the early stages of production, has a tremendous urge to lay eggs psychologically, so she will tend to draw from her body stores so the hen will not gain as much body weight as one that is fed normally. The egg production level may be low, the size of the eggs may be somewhat smaller, feathers on the hen may not be quite so good.

Q Doctor, from your experiences can you tell us whether or not when the amino acid level is deficient and the hen tends to eat more?

A. Well, I am not sure I can answer that question. It depends on the amino acid level somewhat. I think there is some evidence, and I think, in fact, we have some

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Q I notice nowhere in that chart do you recommend any percentage below 14-1/2 per cent, is that correct?

A. That is correct, that is what it says on the chart at the moment.

Q And, you state there, "Protein levels below 14-1/2 are not indicated because at lower levels, corn protein represents such a large proportion of the total protein that the amino acids levels may become imbalanced," don't you?

A. Yes, that is what it states.

Q Is that still, in your opinion, an authoratative statement?

A. The major inbalance that one talks about at that point is amino acids, lysine deficiency in corn proteins. Special attention isn't made to making sure the level of that amino acid isn't at proper levels then just using the corn-soy diet without paying attention to amino acids. That is possible, yes. Again, you have to look at the individual amino acids that are there.

Q Market conditions in certain parts of the country, Doctor, in terms of feed costs and availability of ingredients, do you agree those factors have some effect on the formulation of particular feeds?

A. Yes, I do.

Q And, I think you told us when we were out at Cornell, this is sort of a problem the area is faced with at times

in New England, and, at least in New York State, you have to take the available ingredients and work with those?

A. Yes, this is true where ever you formulate rations.

Q By that, you are not suggesting, are you, that a feed manufacturer could, or should formulate a feed which would have the net result of getting a feed into the chicken which is not balanced, as we have talked about this afternoon?

A. No, I am not talking about that.

Q Then, Doctor, you would agree, would you not, that protein in amino acids deficiency often cause an increase in the liver fat content of the chicken?

A. I don't think you can necessarily say this will take place, because if the hen is going to lose weight from amino acid deficiency, she may actually have a lower, certainly not necessarily an elvated liver fat content. It is possible she could have, but not necessarily.

Q Did you publish something in the ANIMAL NUTRITION AND HEALTH---I assume it is a magazine, in August of 1972?

A. Yes, it is. Yes, I did.

Q Did you make an exact statement in that article that protein or amino acid deficiency often causes an increase in liver fat content?

A. Yes, I said it often did. I didn't say it always did.

Q I didn't ask you that. I asked if it often did. Is that

a correct statement?

A. Yes.

Q And, didn't you also say, Doctor, in that article, "The energy balance of the laying hen, therefore, is critical in regulating the fatiness of the body in excessive calories consumed may readily be converted to liver and depot fat"?

A. Yes, I did.

Q And, again, Doctor, in that article did you also state, "High energy diets are likely to produce higher liver and body fat content than low energy diets"?

A. Yes, I did.

Q And further, Doctor, in conclusion with respect to that article didn't you also state, "When problems do occur with respect to this fat development, a short term reduction in energy level should be looked into"?

A. Yes, that is what I said.

Q Do you know Doctor Singson at the University of Connecticut?

A. Yes.

Q He is a nutritionist?

A. Yes, he is.

Q And, a man whose opinion you would respect?

A. Yes, I would.

Q And, did you know that in connection with this particular

* * *

THE COURT. No, we'll take the answer. We have been pretty liberal on redirect examination, so we will allow it in that case, as far as the defendant is concerned.

A. We have individual mortality records on this flock. In other words, birds that do die; they are posted so we know why they die. In our particular experience, over the last few years, we have around one per cent of the flock mortality, one per cent of the total flock has succumbed to liver hemorrhages from these fatty livers.

Q (By Mr. Divoll) And, have you some observations in relation to the liver fat levels, how it compares in the flock?

A. Well, the experimental birds we have looked at, we haven't examined all these flocks for liver fat levels, we find a large variations within any particular flock we have looked at.

Q Is that a range you can express in percentage?

A. Yes, we have one of the tables in one of the reprints that was submitted, listed some of these ranges that we find, ranging, I suppose, from 20 to 60 to 70 per cent of the liver on a dry run basis can be fat within a flock. It is a rather wide range of liver fat that we see.

Q Now, there was some questions asked you in respect to a 6 per cent oat hull added to the feed for the purpose of

* * *

A. Right.

MR. DAVIS. Thank you.

MR. DIVOLL. Nothing further.

THE COURT. Doctor, I would like to ask you, what is a pullet?

A. A pullet is an immature laying hen, and I usually use the term "pullet". The term, "pullet" is a rather imprecise term, but is used for a female chicken between the ages of, I suppose, a day old on up to when she begins to lay, and many people will refer to young laying hens as "pullets" as well.

THE COURT. Is that where the term, "Pullet eggs" comes from?

A. Yes, it is. It is the small egg from the pullet after she starts to lay.

THE COURT. This has nothing to do with the case, but I had an argument with my wife over that. Thank you, Doctor, you are excused.

LEONARD MERCIA resumed the stand for further direct examination.)

Q (By Mr. Cleary) I can't recall the last question, but I would ask you to assume the production figures which Mrs. LeRiche obtained from the chart from the brown and white egg birds in these various flocks. were geared, where ever possible, where there are two lines on the chart, to the

lower line. I would ask you, or I would call your attention to Plaintiff's "12" and ask you in connection with that question, whether or not that is a chart that is indicative of the white egg expectation, or the white bird production expectation? (Handed to the witness)

A. Now, you are referring to the top curve?

Q Yes, right, the gray area.

A. Yes.

Q Is there a span between the bottom and lower line? Is there a percentage differential of production?

A. Yes.

Q That is in the gray area?

A. Yes.

Q Can you tell us from your observation of the chart what that is?

A. Well, it is about 9 per cent, I would say.

Q Is that standard on all those similar charts?

A. I would say, pretty much standard, yes.

Q Assume with me, for a moment, that the production figures which Mrs. LeRiche used for anticipated production did not exceed the bottom line. In your opinion, would that favor or disfavor the defendant from the point of view of achievable damages in this case?

A. It would favor the defendant.

Q Now there was some talk, Mr. Divoll asked Mrs. LeRiche

whether she was aware of some information available that when birds go into cages you should expect about a 5 per cent egg loss in the cages situation, because the eggs are just destroyed. Were you here when that question was asked?

A. Yes.

Q Now, based on your knowledge of the data that goes into the charts that are there, the white and brown egg charts, are you aware of any relationship, or any consideration given to this 5 per cent factor that Mr. Divoll was talking about?

A. No. I think this curve reflects what eggs are actually picked up.

Q In other words again, it favors the defendant because the only eggs that we are talking about are the eggs that actually come out of the house? Those are the eggs they talk about on the production chart?

A. I am not sure I understand the question. I assume you are referring to the fact Mr. Divoll mentioned there may be 2 or 3 per cent eggs that go through the bottom of the cages, eggs laid without shells, and things of this nature?

Q Right. There was an indication, I think, that some allowance should be made for that in the production expectation figures. Do you agree with that?

A. No, I don't think it should be considered at all.

Q Why not?

A. Because they are eggs not picked up and not plotted on the curve.

Q Even if they were, there is approximately a 9 per cent variation which, if you assume my fact, may well have been considered in the production charts themselves?

A. Yes, it looks to be about 9 per cent.

MR. CLEARY. Thank you; nothing further.

CROSS EXAMINATION

Q (By Mr. Divoll) I noticed when you said with reference to this last question that you think the chart refers to eggs picked up, are you still just thinking, or are you sure of that?

A. I am sure of that.

Q Well now, as I understand it, these charts were published by the chicken grower to show the goals that could be attained. Is that as you understand it?

A. Yes, these that I have on hand I think were all published by Isadore F. Nelson, although this one here, it is DeKalb Warren, yes.

Q Now, in your experience here as an extension dairyman of the State of Vermont, can you give us the number of relationship of caged layers and number of floor layers?

A. At the moment, you would like to know the number?

Q Yes.

A. I would say where we are referring strictly to market

egg birds, and I would assume probably 85 per cent of our birds are in cages today.

Q In Vermont?

A. Yes.

Q And, you are talking about table egg birds?

A. Yes, market egg birds.

Q Well, even if you say 85 per cent, even at that, figure, aren't the producers of this chart, and the breeders of birds personally listing themselves, aren't they missing some eggs that should go into their chart?

A. On the basis of this 3 per cent?

Q Yes.

A. Regardless of whether you are talking about a floor operation or a cage operation, there are certain eggs that are broken, they may be eaten, may go through slats, or crushed on the floor, or go through the bottom of the cage, and these eggs are not existent, and I shouldn't say I think, this curve that we have is based on the number of eggs that are actually picked up.

Q You think that?

A. No, I changed that. This is the way it is.

Q And, even though by so publishing the chart reflecting that the breeder of the chickens personally listing his bird and what it will do?

A. I suppose you could say that.

Q In reference to the homosote building and your visits there to Mr. LeRiche's place, you have been in that building?

A. I have been in the building, yes. It has been a long time.

Q Well, could you give us an estimate of how old that building is?

A. Well, I would say it was probably built in probably the early Sixties.

Q The evidence here is that the homosote building is of wood construction and has wood exterior and a wood interior. Are you able to remember that from your visits there?

A. I believe originally it had a homosote exterior. I believe that is the reason it was called the homosote building.

Q That is a wood fibre wood, isn't it?

A. Yes, it is a wood fibre board.

Q And, the interior was wood?

A. I can't recall, but I think it was.

Q Now, how about the Complex "C". You helped design that?

A. Yes, I provided plans for the housing, yes.

Q Do you know the materials used in it?

A. Well, I know the outside is sheathed with metal; has a metal roof.

Q What is the inside sheathed with?

A. I believe that is sheathed with metal also.

Q Now, in your experience in going in the different houses, have you found any difference in the--it is hard for me to describe--I'd say, the environmental conditions in the houses between those that are wood lined and those that are metal lined?

A. I don't think I could draw that conclusion, no.

Q Then even though you have a controlled atmosphere, you think a wood lined house is exactly the same environmental field as a sheet metal lined house?

A. You have certain differences such as the reflective value of the material. In some instances, theoretically, you get away with less light power to accomplish the same end.

Q There is a different noise ratio, too, isn't there?

MR. CLEARY. If you know, Mr. Mercia.

A. I guess I wouldn't be able to answer that. I don't know.

Q (By Mr. Divoll) In your design of these buildings, you don't take that into consideration?

A. No.

Q The ventilation system in the buildings, you think, is the same?

A. It was designed with the same criteria.

Q That is, cubic feet per minute?

A. Yes.

Q And, is it exhaust fans or automatic, as I understand it?

A. Thermostatically controlled, yes.

Q I can't think of the word, but are they called bitumenistat also?

A. No features on them, as far as I know.

Q In either of the buildings?

A. No.

Q How is the intake control?

A. These are slotted inlets in the new complex. I believe they are six or eight inches wide on the wall opposite the fans.

Q Is that the same in the homosote building?

A. I can't recall. Some buildings are designed with

Q slots, some both sides; some of them we bank the fans, and we are able to include slots on both sides within a distance of eight to twelve feet of the fans.

Q Disregarding the location of the intakes, can you tell us whether they are manually operated in both buildings?

A. Yes.

Q So if you had a different man tending the different buildings there could be a variation in the temperature control by the difference in the adjustment on the intake?

A. Yes, there could be differences.

Q I think you testified that the quality of management was

good?

A. Yes.

Q Is egg collection a part of management?

A. Yes, it is.

Q And, is lighting a part of management?

A. Yes.

Q What does your department recommend in reference to the collection of eggs?

A. You are speaking now of cage houses, or floor operations?

Q Let's say, both.

A. In floor operations we recommend collection of at least three times a day. In the cage operations, we recommend that they be collected twice a day.

Q Would it be consistent with your feeling of good management if the evidence showed that the eggs were picked up spasmodically depending on the demand for different type of eggs at a particular time?

A. Yes.

Q That would be consistent with good management?

A. It wouldn't be consistent with our recommendations.

Q And, your recommendations are based upon what you call good management?

A. Yes.

THE COURT. Counsel want to approach the bench

please.

(At the bench off the record)

THE COURT. Ladies and Gentlemen. We will take our evening recess at this time, and I am going to ask if you would return in the morning at nine o'clock. Will that bother anybody?

(Juror Number 8 raised her hand.)

THE COURT. How badly? What is your problem, Mrs. Bartlett?

MRS. BARTLETT. I have a very young child. It is hard to get her up too early.

THE COURT. Let's put it this way. We'll reconvene at nine and start as soon thereafter as you can get here. So if you try, we'll appreciate it. If you are a little bit late, we'll understand why. Is that fair enough?

MRS. BARTLETT. Yes.

THE COURT. Please don't discuss the case with anybody. We'll stand in recess.

(Court recessed at 4:35 p.m.)

(January 16, 1974; 9:05 a.m.)

THE COURT. Mr. Divoll, you were examining Mr. Mercia, I think.

MR. DIVOLL. Right.

(LEONARD MERCIA resumed the stand for further

cross examination.)

Q (By Mr. Divoll) When we closed last night, Mr. Mercia, I think we were discussing the management of picking up the eggs, and, is there a recommended practice in the industry on how often eggs should be picked up?

A. Yes, as I stated last night. I believe what I stated our recommendations for floor setups are a minimum of three times daily, and in cage operations, we like to see twice a day pick up, with one pick up a day minimum.

Q Now, is it important to acquire a good quality egg that the temperature be lowered as soon after it is laid as possible?

A. This is desirable, yes.

Q Is that because the faster it cools, the better taste or flavor it acquires?

A. What we are trying to do is prevent the evaporation of a content and the breakdown of the interior of the egg through unseen action which is hastened by higher temperatures.

Q Is that the reason for the early pick up of eggs, or the many times?

A. This is one of the basic reasons; others involve the breakage, but this is the most important factor.

Q Now, another thing, how are eggs cooled as a general proposition?

A. Usually, the eggs are washed and processed and then cooled, and

Q And, are they cooled in the flats themselves, or are they cooled in baskets, or something that circulates the air?

A. In some of our more out-moded situations, they are cooled in baskets where eggs are collected by hand and in baskets. They are cooled in baskets, but with the more modern, or conventional setups now, a lot are cooled in filler flats.

Q When an egg goes through the washer and grader, is the washer a warm water?

A. Yes, it is.

Q What would occur if eggs were picked up in flats and stored in a cooler, and cooled, and then went through the washer? Would the temperature of the egg be brought back up to the temperature of the water again?

A. No, the temperature of the egg wouldn't be brought up to any maximum degree. The process only exists two to three minutes and the shell is, of course, the temperature is increased during that time, but the interior varies little.

Q You said the water was warm. In degrees, what are we talking about?

A. One hundred ten to one hundred fifteen degrees, usually.

Q You say the egg is emersed in the water for three minutes?

A. Depending on the washing system; some of the older systems, they are emersed, and in other systems they are actually sprayed, and in other systems brushed with nylon brushes. It depends upon the equipment.

Q I show you Defendant's "C" which is the CHICKEN AND TURKEY RATIONS FOR 1972, put out by the several New England colleges. Are you familiar with this pamphlet? (Handed to the witness)

A. Somewhat; my co-workers are involved in the recommendations.

Q Who is Mr. R. P. Davidson from the University of Vermont?

A. Director Davidson is my boss; he is Director of the Extension Service.

Q And, you are in the Extension Service?

A. I am a member of the Extension Service, yes.

Q And, what is your understanding what this pamphlet represents?

A. This represents the recommendations of the several New England college nutritionists. They meet anually to set up the recommendations and publish this brochure.

Q Are you familiar, without looking at the pamphlet, with the energy recommendations of the New England colleges as expressed in this pamphlet?

A. I can't recall exactly, no.

Q I ask you to turn to Page 2, under "Chicken Rations".

MR. CLEARY. What document are we referring to?

THE COURT. "C".

MR. CLEARY. Is that in evidence, your Honor?

THE COURT. Yes.

Q (By Mr. Divoll) And, ask if the energy recommendation is given on Page 2 there?

A. The calculated analysis of the caged bird diet for the 3-1/2 to 5 pound birds is 1,340. Did you want me to read those numbers?

Q Yes,

A. And, for the five to seven pound birds is 1,277.

Q And, is this a recommendation that you, in your job, follow?

A. Yes.

Q Have you had any chance to acquire the knowledge of the energy in the 18 per cent Pease grain?

A. I haven't.

Q In your position as extension dairyman---

A. Extension poultryman.

Q Sorry; do you keep track of the general conditions of the industry from year-to-year?

A. What exactly are you referring to?

Q Its ups-and-downs.

A. Yes. You are talking about prices, this sort of thing?

Q Yes, general economic conditions.

A. Certainly, we do.

Q What were the general economic conditions of the industry in 1971?

A. Well, I think we can say in 1971 the prices were relatively low; egg prices were relatively low.

Q It is a fact, isn't it, Mr. Mercia, that the chicken egg producers were having a difficult time, economically, in 1971?

A. In some areas, particularly, yes.

Q And, was Vermont one of those areas?

A. Vermont is a little peculiar in this respect in that our people run the whole gamut, so to speak, the producer, the processer, and the marketer in about 95 per cent in the instances, and they have a little bit more leeway to work with than some of the people who are selling on the open market.

Q But, economic conditions were, generally, very poor?

A. Yes.

Q How about 1972?

A. 1972, as I recall it, they were a little better; not much, but a little.

Q Well, the early part of 1972, they weren't much better, were they?

A. No.

Q And, the last two or three months of 1972, they improved?

A. Began to look better.

Q Was that about the time that we had some problems with the meat industry?

A. I don't know exactly what you are referring to here.

Q Didn't, generally, meat prices increase the latter part?

A. Red meat prices.

Q Do egg prices follow meat prices?

A. Not exactly; there is some correlation.

Q There is some relationship?

A. Yes.

Q Now, I guess we are not concerned with 1973. You gave some testimony as to these charts. Do you see a great many of those charts in your work?

A. Not a great many of them, no.

Q Then you don't go out on the farms, as a practice, and look at the production charts?

A. I go out on the farms, as a practice. The thing I more frequently see is the pin records and the actual production figures. On occasion, I do see the curves.

Q And, are you able to relate what you observed from the pin records to the curves on the chart?

A. When we figure percentage production, yes; fairly well, yes.

Q In your experience, what is your experience in relationship--do the people that you visit and see in the field attain

the goals that are suggested in those charts?

A. Of course, it varies from farm to farm, but as I mentioned yesterday, I feel that these goals are attainable goals.

Q I don't dispute you that they are attainable, but from a practical field position, how many people actually do, from your experience, attain those goals?

A. I would feel on the average our people do attain these goals.

Q On the average?

A. Yes. Obviously, we will have some that will be below, and some that are higher. We see records that go over 250 eggs per bird; some are pretty well on the line, and we had some that even went 260. That is why, on the average, we would expect to see this sort of production.

Q Now, are you acquainted with the different breeds of birds and their expected production?

A. Fairly well, yes.

Q What is a bird called a Schaffer 288?

A. This is a Leghorn type bird.

Q Is it a comparatively recent development?

A. The Number 288, I don't know. I recognize Schaffer, and I know we have used it in the area some, but I don't recall the number.

Q Has your department had experience with the Dekalb?

A. Our department?

Q In acquaintanceship with the field in production of the Dekalb White Leghorn.

A. Limited. Most of our industry is brown egg birds, so the Leghorn birds are in the minority.

Q Would you be able to say whether or not the Schaffer 288 was a similar bird to the Dekalb White Leghorn?

A. Yes, they both lay white eggs; both light-type birds.

Q I think part of your work was in the design of poultry setups and the advice with respect to that design?

A. Yes, with the help of our egg engineering department, this is correct.

Q In that connection, are you familiar with what we have termed "counters," the egg counters?

A. Not very familiar, no. Most of our people don't have counters. Their systems are set up so that the eggs move in line to their pick up station, or directly into their egg processing facilities, so there is no need to use the counters. They actually make a physical count of the eggs as they come into the gathering room.

Q Do you know what the industry problems with counters are?

A. I don't.

Q You probably have seen these charts several times, haven't you?

A. I probably have.

Q And, I want you to look at "18," "4," "3," "2," "16," "10," and "12," and then look at "30" and "20". (Handed to the witness) Have you examined them?

A. Yes.

Q Now, the evidence in this case is that "30" and "20" are from flocks that the eggs were counted by picking them up by hand and placing them in flats, which have a specific so many eggs go in a flat, so you count the number of flats, and you have an accurate number of eggs, and all the other exhibits are from flocks counted by machine.

MR. CLEARY. Your Honor, if we might interrupt for a moment. That is not our recollection of the evidence. I think Mrs. LeRiche testified at some point in 1971, counters were installed, and I don't think there has been any reference yet as to the exact date that automatic counters were put in.

THE COURT. Let's hear the entire question, first.

MR. DIVOLL. Strike it , and I will begin over.

Q (By Mr. Divoll) The evidence in this case is that in respect to Exhibits "20" and "30," that those eggs were picked up by hand and placed in flats, and the flats were counted, and that the other flocks represented a count by machine. From an over-all study of the two types of charts, is there any significance there in the production records that

you see?

A. Yes, the obvious difference, of course, being the lower production in all these charts.

Q In these charts you are referring to the machine counted charts?

A. I am referring to these charts, yes.

Q And, so that the two hand pickups and flat counted charts represent a higher level of production than the machine counted charts?

A. These two charts represent a higher production level.

Q I show you Plaintiff's "63" which is the 1972-1973 POULTRY MANAGEMENT AND BUSINESS ANALYSIS MANUAL, again, published by the Extension Service of all the colleges, and reference has been made to the expected daily egg production on Page 11, and, is it a fact that the daily egg production there, assuming a housing at 22 weeks of age?

A. Yes.

Q Now in respect to the brown egg in cages, is the number 224?

A. This is on a hen house basis, yes.

Q And, the white table egg in cages is 235?

A. Yes.

Q What would be the effect on those numbers expected if they were processed from twenty weeks instead of twenty-two weeks?

A. Probably, we would expect a slight decrease in the number of eggs during the period.

* * *

in cages. These are brown egg birds, and we are practicing, or we are seeing a practice of feed restriction in these cages, because they can be done without too much additional labor, and it isn't quite as tricky as it is on the floor. So to this extent, we are seeing controlled feeding programs in growing birds.

Q Is it a general practice in Vermont?

A. I would say it is not a general practice with out market egg birds in the State of Vermont.

Q And, is it a recommendation of your department?

A. It is not a recommendation of our department in the situations on the floor because it requires for one thing, a lot more labor and attention to details. It can be complicated by coccidiosis. Up until March of 1972, Marek's Disease was a real concern. We were losing up to 35 per cent of our birds during the growing period and acting on the assumption that well fed birds better handle the situations--we just didn't dare recommend this-- so these are some of the reasons why we haven't recommended this.

Q Have you reached any conclusion that the results desired can be obtained by some other method than controlled feeding?

A. For several years we have gotten at the problem of delaying maturity by recommending lighting programs.

Q You were here when Doctor Nesheim testified yesterday?

* * *

two or three days?

A. Well, I would think, and again I say, this happened to be the farm where I conducted the research. By the way, I don't know if you are interested in the procedure I followed or not, but I was concerned about this, so in an attempt to answer this question, I went up and the eggs weren't gathered on the weekend, or Sunday, I believe it was, and I ran the samples in the house where they roll out on the tray, and at the end of the cages where they come onto the cross conveyor belt and then candle these eggs for cracks and checks, and I went back the following day, on Tuesday, which would be a normal collection, and I did the same thing, and as I indicated, I found no substantial difference, which surprised me.

Q And, when did you do this?

A. I believe this was early in the summer of last--I believe it was in 1972, the summer of '72.

Q Before you were talked with about this case?

A. Before I was talked with about this case. I was aware of low egg production problems, but I had no idea about the case, at that time.

Q And, do you feel that a lighting program is important in the raising of pullets?

A. Certainly; very important.

Q For the same reasons expressed by Doctor Nesheim yesterday?

A. Yes.

Q Do you know whether a lighting program is being followed by the plaintiff here?

A. No, sir, I don't.

Q You don't know?

A. I don't know for sure.

MR. DIVOLL. All right.

REDIRECT EXAMINATION

Q (By Mr. Cleary) Just a couple of quick questions, Mr. Mercia. Did you run any of these tests on any--I will strike that. Are there any other modern operations like Mr. LeRiche's in Vermont?

A. Yes.

Q Did you run any other tests in any of these other places?

A. I ran tests similar to this in two other places in connection with the Northeast Regional Field Trial we were conducting to determine the amount of egg growers in mechanical equipment.

Q Were your results consistent?

A. I can't say they were consistent because in each case, as far as I know, the eggs were picked up every day.

Q But, in this case?

A. But in the amount of breakage that I found, the results were consistent.

Q And, there didn't seem to be that much greater breakage?

A. No.

Q Now, did you observe the condition of the birds in the "A," "B" and "C" Complexes?

A. On one occasion.

Q With respect to body fat, I have specific reference.

A. On one occasion; I visited just shortly after the problem came to light, or suspected problem came to light. I visited Mr. LeRiche's operation, and he took me into one of the buildings--I don't recall which one it was--and we went down through the cages and pulled out birds and looked at them at random.

Q How did they look to you?

A. The birds we looked at were excessively fat.

Q And, on a comparative basis, based on other birds you have seen, how would you rate these birds with regard to the degree of fat that you saw?

A. Very, very fat.

Q Have you ever seen birds that were fatter than these birds?

A. I don't believe so unless they were meat birds.

Q Would you agree with Doctor Nesheim's testimony that a bird should start into production as a laying hen at about 22 weeks of age?

A. Yes.

Q Do you recall whether you were here when Mrs. LeRiche was testifying yesterday?

* * *

A. Oh, yes.

Q Now, 1972, you said they came from the complex. In what houses did you have white birds?

A. Well, in 1972?

Q Right.

A. Well, we had white birds into the "A" Building and the "C" Building.

Q But, the "A" Building was the molted flock, was it not?

A. "A" Building, molted flock?

Q Yes.

A. I can't recall, sir.

Q Then you had White Leghorns in the "C" Building?

A. Yes, I did.

Q So it must have come from either the "A"Building or the "C" Building?

A. I would assume, yes.

Q But, you don't know which?

A. Here you are again. I don't know which, no. All these movement of birds and all these ages, and these years, and chickens all look alike, you know.

Q Then you had a White Leghorn flock in the "C" Complex?

A. Yes.

Q Now then, another flock in this period of time was a flock that we called C-1?

A. Yes.

* * *

call "automatic feeding". They would come in on conveying chains which go all the way around the building on a little trough, and this was an automatic setup, you might say, set up at a starter rate, so many hours or minutes, whatever they want it, and it is a good system.

Q How about the water?

A. I did not have too many water problems except the Eldridge building at some time was short of water. I can't say just how many hours, but they were short of water there.

Q Now, did the Eldridge building have windows in it?

A. Yes.

Q And, what was the manner in which the lights were operated?

A. They had time clocks there, but I don't know how they were set. I had nothing to do with the lighting except to mention once or twice that the lights were staying on in that building, having gone by this at night, when the pullets were being grown. There should be no lights, and there were lights, and I mentioned it to Mr. LeRiche. I don't know exactly what was done about it.

Q Were you allowed free access to the pullet raising operations?

A. Yes.

Q And, did you take advantage of that free access?

A. When we had white birds, I kept away from them as much

as I could. They were very flighty and very dangerous to get them piled in a corner somewhere and suffocate. About the only thing I could do is peak through a crack in the door to see what they were doing.

Q Were you satisfied with how they were doing?

A. Well, ya. I think you could tell better if they didn't know you were there. They acted more normal if they didn't know you were there. I think they do, anyway.

Q How about the buildings in the laying complex, did you have access to those buildings?

A. I did except one time, yes.

Q What time was that?

A. At the time Doctor Eldridge wanted to visit them. I was with them and nobody was allowed in them except the "B"Building where we did the posting.

Q You went into "B" Building?

A. Yes.

Q You were not allowed in the other buildings?

A. Not that day, no.

Q The rest of the time in your association with Mr. LeRiche, you were allowed in those buildings?

A. Yes.

Q What did you think of the operation of those buildings?

A. I thought they were good; I thought the ventilation was very good, and they were kept clean. I found no fault.

Q Had you a chance to observe the egg collection methods there?

A. Yes.

Q What did you observe on that?

A. I didn't run into anything I thought was wrong, only possibly the main trouble was on Monday morning when the eggs hadn't been gathered since--I don't know--the last time they were gathered, but there was a tremendous amount of eggs on Monday on those belts. It was almost impossible for the belts to handle.

Q Were you in the buildings or in the egg room on Monday mornings?

A. I went in there several times; no special mornings that I remember, but I am sure I was in there on a Monday morning at one time.

Q What did you observe in respect to the collection of eggs by the belt?

A. Nothing would show up inside the egg room. They would be coming in normal there. There are only so many that can come through on the belt, anyway.

Q Did you observe any breakage?

A. There was always signs of broken eggs, yes.

Q What would cause the breakage, if you know?

A. The biggest problem is when coming off the different rows, or cages, they just--some little thing would go wrong, and it would start to pile up the eggs while the

others kept coming, and they were going to go somewhere, and they landed on the floor.

Q You observed this more than once?

A. Yes.

Q How about the condition of the birds there in the complex, what was your opinion of the laying hens?

A. The living conditions?

Q No, the health conditions.

A. I thought they were wonderful, most of the time.

Q The evidence has been here they were fat, obese. How do you agree with that?

A. I never heard that word, "obese" or "fat" as a problem in this whole operation until this last--what they call the "B" house problem started. Then I started hearing about it.

Q That was in August of 1972?

A. Yes.

Q Had there been any complaints made to you by Mr. LeRiche prior to that time about the birds being fat?

A. No.

Q Did you see Mr. LeRiche on many occasions during the one or two years you were salesman there?

A. Yes, he was around there; a lot of days I didn't have time to go in and say hello to him, but I saw him a lot on the premises there.

* * *

laying houses?

A. Yes.

Q And, what was his expression in that regard?

A. He always told me that we had--by "we," I mean the Purina Company--the best growing pullet program of anybody, and they put out a beautiful pullet. He always said they were "tops".

Q Did you also feel that way?

A. Yes.

Q Now, specifically to the birds that went into the "B" Complex, with a portion of them going into the homosote building, were you there when those birds were housed?

A. I was around there. I had nothing to do with handling them.

Q Did you have a chance to observe them?

A. Yes.

Q And, in your opinion, what type of birds were these, as far as you were concerned?

A. I felt they were beautiful, perfect; nothing wrong, I could see.

Q Did you ever discuss this with Mr. Morrill?

A. No.

Q And, insofar as you know, was Mr. LeRiche satisfied with those birds?

A. I am sure he was at the time, yes.

* * *

A. I will answer that, yes, similar.

Q I would like you to look at a letter, Mr. Gauthier, dated June 9, 1971, written by, according to the evidence, Doctor Murray to Mr. Leopold LeRiche with a copy to you. Do you see that down there, "Copy, Arthur Gauthier"? (Handed to the witness)

A. Yes.

Q I would like to call your attention to the first sentence in that letter which says, "The ten 23-week old Babcock White Leghorn hens submitted on June 7th, mainly showed fragile bones, excess fatty condition." Do you still want to tell this Jury prior to August of 1972 the existence of any excess fatty condition in White Leghorn birds---

A. I will say this was back in June of 1971, that I don't remember of doing this, no.

Q The fact is, that you didn't remember that letter?

A. I guess I would have to say I have forgotten it now.

Q But, you did know?

A. According to the letter, I guess so, yes.

Q By the way, when you got copies of those letters from Doctor Murray, what did you do with those letters?

A. Most of them I put in a folder.

Q Did you have it at the office in St. Johnsbury?

A. No, I kept them myself.

Q Did you discuss these communications with the people at

* * *

I suppose he did. He said they were.

Q You felt there was no need to control?

A. When you have 100 per cent, I don't think it is easy to try something else.

Q Now, some question was asked you about recommending to Mr. LeRiche about saving money, and he came in spending more money actually on the L.C. Program you recommended. You recommended he feed their regular 14 per cent laying ration, didn't you?

A. Yes.

Q And, he didn't, and wouldn't feed that ration?

A. No.

Q And, he ordered and bought a special mix 15 per cent ration?

A. Right.

Q This cost him more money, didn't it?

A. Right.

Q So, at least, insofar as the laying program is concerned, he spent more money than you recommended?

A. That is right.

MR. DIVOLL. That is all.

MR. DAVIS. That is all, Mr. Gauthier.

MR. DIVOLL. We call Doctor Snetsinger.

DAVID C. SNETSINGER was recalled to the stand as a witness by the defendant.

DIRECT EXAMINATION

Q (By Mr. Divoll) You moved kind of gingerly; some reason for that?

A. I have some back pain.

Q Have you had it for some time?

A. Yes.

Q Doctor Snetsinger, you have been on the stand before in this case?

A. Yes.

Q I think you gave your qualifications, previously?

A. Some of them, yes.

Q So to bring us up-to-date, exactly what is your title with the Ralston Purina Company?

MR. DAVIS. We have all gone into this before, and while I don't have objection to him going into it again---

MR. DIVOLL. I am not going into it; it is preliminary.

THE COURT. We'll take the answer.

A. General Manager of the General Poultry Research Department.

Q (By Mr. Divoll) As part of your job, do you formulate the feeds?

A. I set the nutrient standards and the ingredient specifications for the rations.

Q Now, we have had much discussion throughout the trial, particularly today, about the so-called L.C. or Life Cycle Program?

A. Yes.

Q Who, in the Ralstron Purina Company, developed that program?

A. I was directly responsible for developing the program. There were people that did some of the research and setup of the standards under the program, but I was directly responsible for it.

Q It was your idea?

A. To a great deal, yes.

Q Who chose the name?

A. I did. I suggested the name; I came up with the terminology used in the program.

Q Now, what was the reason behind your suggestion of the name of "Life Cycle Program"?

A. We felt it was important that not only from a feeding program, but a total management program that we tie the whole concept together with what happens with the pullets during the growing period may affect the subsequent layer performance, and we wanted to try to come out with the best total economic program, particularly for our producers, throughout the bird's life.

Q Was there any research and experiments that went into the development of this program?

A. Considerable time of research testing that went into it; at least four field tests that went into it.

Q Over what period of time?

A. I would say, probably, this was in the range--we were building on previous knowledge, all development is on this basis--but it certainly was about three years in development of this particular concept.

Q Now, when you say "concept," waspart of that the so-called price of proteins?

A. Right. We are interested in reducing the ingredient cost without sacrificing performance. We are interested at optimizing performance at the lowest possible cost.

Q I think it is undisputed several years ago, and for some period of time it has been the opinion that it was necessary to maintain a certain protein level. Would you agree with that?

A. Yes, that is correct.

Q Now, and also I think it is well-covered here, that the industry, the feed industry, the nutritionists, no longer feel that is necessary?

A. Right. I agree with Doctor Hoffman and what Doctor Nesheim said. We have learned sufficient information about the amino acid requirements of the pullets and of the layers, that we can lower the protein levels and use better balanced proteins and some synthetic vitamins to

make up the requirements, and, therefore, finding there is a greater use of lower protein levels within the poultry formulation.

Q Whether or not this is the basis of the L.C. Program?

A. To a great deal. Again, that is one part of it. We are interested in a total program for management and nutritional program, and this development of amino acid standards was a very important part of the L.C. Program.

Q Now, can you tell us when this program was first introduced?

A. Yes, it was introduced, nationally, March and April of 1971. There were certain parts of the country that did not get it until later. Most mills did not have the formulas until twenty, thirty or sixty days after March and April of 1971. So the program started after that point.

Q How long have you been with Purina now?

A. Approximately 6-1/2 years.

Q Give us the date.

A. I joined in July, 1967.

Q At that time, did you become familiar with the poultry program that they had?

A. Yes, I did.

Q What was it?

A. We had a program, the laying rations at that time were called Pro-lay, and which there was a seasonal

adjustment of the rations, and we offered only one ration which is automatically seasonally adjusted, and we had a two-feed growing program, but there was one less ration that was used just before the birds started to lay.

Q Do you know when this program came into effect?

A. I don't have the exact date in mind, but it was approximately four to five years before I joined the company.

Q Now, in your position there, when you went there in 1967 until the L.C. Program was announced in 1971, would you know whether there was any other Purina program for either laying or growing chickens instituted?

A. No, the program there that was in effect when I joined Purina, the use of Pro-lay in commercial situations, Startena and Pullet Developer was in effect when I joined Purina, and there was a major change when we went to the Life Cycle Program in March and April of that year.

Q Was that the only change made during that period of time?

A. There might have been some terminology change, but that was the substantial change in rations and program at that time.

Q Have you been in the courtroom today when Mr. LeRiche testified?

A. I was not here all the time he testified, no.

Q Now if his testimony was that in July of 1970, this group

from Purina came to discuss with him and sell him a new program, was there a new program in existence in July of 1970?

A. No, there wasn't. This wasn't the year that we normally present a seminar material. That year was sort of a holding year. We knew we were coming up with a new program the next year and were still field testing it, but there was no new program in 1970.

Q And, certainly there was no Life Cycle Program?

A. No, that terminology was still yet to be formed in my head. It wasn't until probably October, somewhere, of 1970 that I started to consider what the terminology and how the standards were finally going to be conceived for the program. This is the final form. There was some field testing of rations in the field. At this point, we were doing some field testing, but the terminology and some of the final concepts were not developed until October of 1970.

Q Now, were you acquainted with their Pro-lay Mild in 1970 and 1971?

A. Yes.

Q And, I show you Defendant's "A" and we'll note that the word "Pro-lay Mild" is used as a product in deliveries over a certain period? (Handed to the witness)

A. Yes.

Q And, it has a percentage of 14 per cent there on those sheets?

A. Yes.

Q Did Pro-lay Mild actually have a protein content of 14 per cent?

A. No, Pro-lay Mild was a 15 per cent tag guarantee; a minimum of 15 per cent protein that we had to meet by law.

Q What was the feed that your L.C. Program recommended for the layers?

A. Well, there was a change within that to a minimum of 14 per cent tag guarantee that we had to have. Again, by state law, we had to have at least 14 per cent within the ration, but we formed it on the basis of amino acids there so the protein could vary.

Q So the protein could vary?

A. Yes.

Q Does the Purina program, or was any manufacture of feed by Purina as a standard brand of the L.C. Cycle; that is, a 15 per cent ration?

A. None of our standard L.C. Layenas carried a 15 per cent guarantee.

Q Now the testimony here is that Mr. LeRiche received a 15 per cent L.C. Layena?

A. Yes.

Q And, is that a special mix?

A. Yes.

Q Do you know of any other instances of anybody receiving a special mix of this type?

A. I have none in mind; there could be, but I have none in mind.

Q It certainly is not a standard mix?

A. No.

Q Now, there has been much talk during this case about the energy level, and have you heard the recommended energy levels?

A. I remember Doctor Nesheim saying that the energy levels he used was from 1,250 to 1,350 metabolizing calories per pound, and Mr. Morrill, I believe, testified something to the effect it was from 1,275 to 1,295 metabolizing calories per pound. There is also testimony, I believe, in the New England College Conference levels, and I think those were something like 1,270 to 1,350. There are two rations mentioned.

Q Are you acquainted with the energy level that is in your regular L.C. Layena mix?

A. Yes, I am.

Q Is that within this energy level range?

A. Yes, it is.

Q Are you acquainted with the energy level in Mr. LeRiche's special 15 per cent mix?

A. Yes, I am.

Q And, is that within this recommendation?

A. Yes, it is.

Q Within the recommended energy range?

A. Yes, it is.

Q Now, certain of the nutritionists and the extension services make recommendations in respect to amino acid levels?

A. Yes.

Q And, are your amino acid levels within those ranges?

A. Well, the area of amino acids, we feel like we know just about more than any other companies, or any other nutritionists know about the amino acid standards for commercial layers, or replacement pullets, and so that in some cases they have lower requirements or higher requirements depending on what they anticipate that requirement to be. I feel our knowledge of the amino acid requirements is the most accurate, perhaps, with one exception, in the world.

Q What is that exception?

A. Well, I don't know what their other standards are, but this is Lever Brothers Feed Company.

Q As a nutritionist, and as a developer of the formula of the Life Cycle Layena feed, are you satisfied that it contains all the essential amino acids necessary for the job

for which it is made?

A. I am, to the best of the knowledge we have today.

Q Now, the research farm there is outside of St. Louis?

A. Yes, it is at Gray Summit, Missouri, about forty miles west of St. Louis.

Q Do you have any connection with that farm?

A. Yes. This is where our poultry research is conducted, and people not directly under my control but who do the research work for me are at that farm.

Q And, can you describe the farm a little bit?

A. Well, I believe there are approximately 620 acres there. It was founded in 1926. We have facilities in the poultry area with research with approximately 10,000 laying hens and in the range of 20,000 pullets, and at one time up to maybe 50,000 pullets. During the course of one year, we have an extensive experimental mill that can manufacture rations to our precise formulation, so we can test for various nutritional concepts. We do studies there on quite a different variety of strains, and nutritional programs, study ingredients, their nutrient availability. So we have quite an extensive research program going on there in the poultry line.

Q Does it also cover other chows?

A. Yes, fish, dairy animals, swine, rabbits, dogs, cats, all of the various livestock and domestic pets that Purina

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that because of management problems, that controlled feeding presented a real problem, and that they found that they could accomplish the same purpose by a controlled lighting program. Do you go along with that thinking?

A. Yes. It is important to have a sound lighting program, and one can delay sexual maturity to some degree by the proper use of the lighting program.

Q And, what is the purpose of delayed sexual maturity?

A. The purpose of delaying sexual maturity is that in some cases the birds start to produce eggs too early at a very young age before they are matured. They will produce very small eggs and have a low peak production.

Q Now, if the birds were improperly lighted, would it bring them into production earlier?

A. Yes, it would. By "improper," this means more light than the birds should be grown on. Birds should be grown on a decreasing pattern of light, as Doctor Nesheim has testified, and it would be important that either a very low level of light, a short day type of thing where the birds have only access to 8 or 9 hours of light per day, or a decreasing pattern of light being used for these birds.

Q Would it be a fact that because of our particular relationship here in Vermont to the Equator, that this varies in different seasons of the year?

A. Yes, it very definitely does in that birds that are

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controlled fed is very small. I have talked with the extension people throughout the eastern region. For example, I have talked with producers throughout the eastern region and in the New England area, and I find very few people actually control feed their pullets, although I feel at times this would be an advantage to them if the birds were going to be heavier than what they should be. So from my experience, I find there is very little controlled feeding being done, actually.

Q And, has this experience extended to the State of Connecticut?

A. Yes, it has.

Q Do you recall that Doctor Hoffman stated that in Connecticut, nearly all the pullets were controlled fed?

A. Yes, I do.

Q Was this your observation?

A. No, it is not my observation. In Doctor Hoffman's testimony, I did not get fixed in my mind whether he was talking about broiler breeders, which are controlled fed in the State of Connecticut, but as far as the medium white birds, or commercial light-weight bird, I think he is misinformed as far as the number of birds that are controlled fed, because I think this is very low in the State of Connecticut.

Q Now, do you make recommendations in commercial layer pro-

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gathering.

Q Does the industry, from your studies, have a generally accepted percentage of losses in caged birds for the reasons you have expressed?

A. Yes. I think there is work from the University of Texas which indicated about two to three per cent of these eggs just drop through the cages and are never checked. They did this study by spraying every egg that dropped down through the cages and counted the percentage loss because of this, so they were able to get a fairly accurate count.

Q Now, we have been concerned a great deal with what is called fatty liver syndrome, is that right?

A. Yes.

Q Now I think that you described the fatty liver syndrome as a rather broad combination of symptoms?

A. Yes, I have. I feel like it includes a lot of things have lumped. It is called a syndrome because that is what it is--it is a combination of symptoms. There is a condition of an infilteration of fat within the liver; there is a condition of usually high body weights and higher fat within the bird; there is hemorrhages that occur and some mortality, and Doctor Couch, in Texas, suggests possible lower production.

Q When was fatty liver syndrome, so-called, first described?

A. As Doctor Nesheim testified, it was first described by Doctor Couch at Texas A & M University in 1956.

Q Is that the beginning of its problems?

A. There could have been something before this, but this is roughly the time that it was first described.

Q Shall we say, pinpointed?

A. Yes, right.

Q Since then, during this time since then, has anyone been able to reproduce what we regard as a fatty liver syndrome?

A. Well, Doctor Nesheim in his testimony, I think, and there has been reference to Polin and Wolford having been able to produce fatty livers, and the way they have done this is to force-feed chickens to literally take feed, put it into a semi-solution, and force it down the throat of the chicken, and they have been able to produce fatty liver syndrome in both non-laying and laying hens, and this is, I consider, artificial. I believe Doctor Nesheim considered it an artificial type of fatty liver syndrome, not a natural or type of thing we see in the field.

Q To your knowledge, has this ever been produced by the normal feeding of rations?

A. No. This is a field problem, and a number of people have tried to reproduce fatty liver syndrome, and roughly from 1956 to 1974, that is 18 years, no one has ever been able to reproduce fatty liver syndrome, experimentally.

I think if it were a matter of just energy levels or controlled feeding of birds, or anything like that, that surely somebody within that time span of 18 years--and this has been rather extensively investigated--would have been able to produce the fatty liver syndrome.

Q Have all those methods been experimented with in an attempt to produce fatty liver syndrome?

A. Well, levels of energy have been examined for the growing period, for the laying period, and no one has been able to produce it. Now there are suggestions, and this is rreally just suggestions as to what might cause it, but no one has been ever able to produce what we would consider the field situation of a fatty liver syndrome.

Q Is this so-called fatty liver syndrome something that has been more prevalent since the turning to the producing of eggs in cages?

A. Yes, I think it has been since 1956 when Doctor Couch first described it. There has been a movement to use of cages for rearing of birds, for maintaining birds in cages during the laying period. I would think the incidence has increased, certainly, from the time he first described it.

Q And, during this time--maybe I have covered this--has any one ever been able to reproduce the so-called fatty liver syndrome by the feeding of high energy rations?

A. No, there has not been anyone able to reproduce it,

and high energy rations have been studied both during the growing period and laying period, as far as an attempt to reproduce it.

Q Now, Doctor Hoffman has testified that the higher energy rations are the cause of fatty liver syndrome?

A. Yes.

Q Do you agree with this?

A. No, I cannot agree with what Doctor Hoffman said; that if higher energy rations were the cause of fatty liver syndrome, then somewhere along the line somebody would have been able to reproduce this experimental by feeding a higher energy ration, and nobody has been able to do that.

Q But has the fatty liver syndrome become an industry problem?

A. Yes, it is one of the industry problems that we have, and no matter what feed company that is involved, it is a problem that everyone has to face.

Q Now in your studies, would you describe to us when it is a problem, what area of the flock it hits, and what you can expect as a problem?

A. You mean what percentage of the group flock might be involved?

Q No. In this instance we have a whole series of flocks in one operation that all, allegedly, have what is called fatty liver syndrome. Is this consistent with your

studies and the other studies in the field?

A. Of course, I can say from studies at our research farm, but I think it is highly unusual that we are dealing with, as I understand it, three different breeds. I think Schaffer, H & N, DeKalb and the DeKalb Warren, four different breeds have been mentioned; different locations have been mentioned, and I think it highly unusual all these strains, all these locations, all of these flocks would have fatty liver syndrome.

Q And, what is the usual form in which fatty liver syndrome appears in an operation?

A. I don't exactly know what you mean by a "form".

Q Doctor Hoffman testified to the effect one flock in a certain number and not in the others, Let's assume that a man has a group in his operation of 100,000 chickens, but which are divided into 10,000 chicken flocks. What is the incidence that you have seen of fatty liver syndrome out of the whole 100,000?

A. Well, there is a variety; it is a spotty thing. I think, periodically, one flock or two flocks might come up with it, but I think I heard somebody say one out of twenty-five flocks might have a problem with this sort of thing, and I would say even in my estimation it is much less than this--maybe, one out of fifty would be in the range, I would say.

Q When you speak of "flocks," are you speaking of the individual flocks?

A. I am talking about individual houses of birds.

Q I see, so that if I follow you correctly, if a man had several houses of birds, it would be unusual to have more than one house affected by it?

A. It would be highly unusual to have more than one or two flocked affected by this; the percentages would be against it.

Q Now, the name of a Doctor Trevor Morris has been mentioned. Are you personally acquainted with him?

A. Yes, I spent a week in his home back in September when I was in England.

Q Has he visited you, too?

A. Yes.

Q Why did you go to England?

A. I was invited over to England by Doctor Morris to give the key paper at a symposium on energy utilization in chickens.

Q Now, did he conduct some particular experiment?

A. He has conducted a number of different experiments.

Q But was one, and I think his pamphlet in reference to an exhibit here in evidence, was one to do with energy level?

A. Yes, he has conducted an experiment--well, it wasn't an experiment. Let me clarify what he did. What he did

was to summarize a number of experiments that were conducted both in Europe and in the United States on energy utilization by chickens of various weight classes, and what he found is that this light-weight strain, which would be represented by DeKalb, H & N, Schaffer, had a very good ability to regulate their feed intake, or their energy intake; that every time, for example, that you increase the energy intake by one per cent of a ration, the hens would decrease their feed intake by one per cent, so they consumed the same number of calories per day. At the other extreme was the broiler breeder group, the group used to produce the meat chickens, and these birds had a very poor ability to regulate their energy intake, and so that as you increase the energy content in these birds' rations, they had a tendency to consume more calories than what they should at the higher energy rations. Now the medium weight birds were somewhat in between this; that they had a tendency to consume slightly more calories. He studied and took everything that was available in the literature that he thought was good data and put this into his paper. So he did quite a broad range of energy values.

Q Was there some reason why you were selected to give this paper at that meeting there in England?

A. Well, Doctor Morris thought and stated to me he thought the work that we were doing on energy utilization in

chickens was very interesting, and that he wanted the group in England--it was really an international symposium--to hear what we were doing.

Q I show you Plaintiff's Number "98" and this is Doctor Morris' pamphlet on that which you just described. Have you summarized his notations as expressed in that pamphlet? (Handed to the witness)

A. Basically, this summary comes down to the fact that he did a number of--not studies--he took the work of others and summarized this, and, basically, it comes down to the commercial layer, the white egg strain birds eat to meet their energy and do a pretty good job of this. They very well control the number of calories they consume per day by regulating their feed intake. The very heavy birds have less ability to do this. The medium birds are somewhat in between.

Q Now I think you stated that the so-called fatty liver syndrome was an industry problem, and a problem that all feed companies had to accept and attempt to meet?

A. Yes.

Q In that regard, have you, at Purina's experimental farms, conducted studies on the fatty liver syndrome?

A. Yes, we have.

Q In those studies have you ever found any association of liver fat, and/or body weight with egg production?

A. We had one test which I can best rely upon to answer that question, in which we had a spontaneous occurrence of fatty liver syndrome, and in this occurrence we did reduce the energy content of the ration by limiting the amount of feed that the bird could consume, but keeping the same level of amino acids, vitamins and mineral intake to these birds. What we found, there was no decrease in egg production, and no relationship to liver fat and production rate between the two groups. The ones where we limited energy and the ones we did not, egg production per day was the same. However, we were able to reduce the mortality that occurred due to liver ruptures by lowering the energy level. So to answer your question rather specifically, we did not find that there was a relationship on a hen day production basis between the liver fat and the ability of the hens to produce eggs.

Q Were those findings in your experiments consistent with the findings that Doctor Nesheim made in his experiments at Cornell?

A. I think they agree very well.

Q Have you had cases of, I will say spontaneous, or, at least, unattempted production of fatty liver syndrome in your research flock?

A. In this one case we did have a spontaneous occurrence of it. In fact, these birds were controlled fed during

the laying period--excuse me, control fed during the growing period--and we did not find there was any relationship of the controlled feeding program to the incidence of the fatty liver syndrome during the laying period.

Q Now, you said that they were controlled fed during their growing period?

A. Yes.

Q This was an experimental controlled fed program?

A. Well, it would have been done similar to a field program. We were actually quantitatively limiting the amount of feed these birds could consume on a daily basis during the growing period.

Q But were you making extra effort that would not be made in the field to control these birds?

A. Yes, we were weighing out, by hand, each day the amount of feed that these birds would have. This was a very accurate record of feed intake. So we did feel like we actually did control to the point where we wanted to control them.

Q Did you keep accurate records of their weight so you would know how they were affected by this sprogram?

A. They were lighter in weight when they went into the laying house, but we did not see a relationship to the fatty liver incidence during the laying period.

Q Now you have heard Doctor Hoffman testify that too many

calories cause fat, and that calories are the only source of energy, or the only source of energy is the feed; therefore, the feed causes the problem?

A. Yes.

Q Was that, essentially, his testimony?

A. That is right.

Q Do you agree with that?

A. Well, I think that is a very simplistic way of reasoning. What he said is essentially correct. The only way we get calories is from something that we consume, but to use an analogy, let me further say that this does not explain why birds at some time either over-consume calories or under consume calories. I think I could use the analogy if we didn't have lungs, we wouldn't have tuberculosis, but we certainly would die without having lungs. The bird needs calories, it has to have calories, and unless it has calories within its ration, it will not grow, it will die. So we have to have this within the ration.

Q Now, referring particularly to the case we are concerned with here, did you ever have occasion to talk to Mr. LeRiche about his problem?

A. Yes, I did.

Q Would you describe when it was, the best you can, under what circumstances, and what was the substance of that?

A. To the best of my memory, it was some time in August,

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Q If that same question had been posed to you, would you have been able to answer it?

A. I could not speculate on what happened to flocks that I have never seen going back several years, about which I never had any records of, or which I knew nothing about the condition of the pullets. I just couldn't make a judgment upon those birds.

Q Now, would you tell us what a strain of a chicken is?

A. Well, a strain is--perhaps I had better go back one step beyond strain to get my explanation correct, but we have breeds of birds; White Leghorn is a breed of bird, and we have Rhode Island Reds and other breeds of birds; Plymouth Rock is another breed. Then within that breed, geneticists and breeding operations have started their own specialization and gone over and tried to make their own bird from their various breeding technicians, so then we have strains identified by the breeding farms as far as their particular production of a bird. So we have a DeKalb 161 or 131 which indicates a specific strain that DeKalb produces. We have a Schaffer 288 which is another White Leghorn breed, but a specific strain within; the H & N is a specific strain, but then we get into the area of the red birds. They are different breeds, but we could still have specific strains within the red birds such as a Warren, a Harco, Hubbard Comet would be a

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and my development, and the terminology, and so forth.

Q Now, let's assume that you have there in St. Louis, in your department, developed this particular formula. Would you follow how that is submitted and used in the various manufacturing plants?

A. Well, to me, the formula is actually the ration that says X percentage of ingredients you will put out. I don't actually do setting up of each ration that goes throughout this United States or throughout the world. What I do is set up nutrient specifications and this means that our rations have to have so much calcium, phosphorous, vitamins, amino acids, et cetera in relationship to the energy with a variety of products that we produce. We would also set up certain specifications on ingredients that you could not exceed X per cent of this ingredient, or you would have to have a minimum of this ingredient, and so on. These specifications are then put into our computer. The ingredients, at each plant, are identified as far as what their costs are and their availability. This information is put into the computer and a formula is derived and sizes of various ingredients which would give the lowest cost production for the ingredients we have available, the lowest cost of production of a dozen eggs. This ration, this formula would be sent out by our formulation division to a specific plant where it would

be manufactured.

Q And, there are several plants throughout the United States?

A. Yes, quite a number.

Q Now, your formula is based upon standards and ingredients and nutrients?

A. And the price of those.

Q In the different areas?

A. Right.

Q The formulation at the different mills varies as to the ingredients available at that mill?

A. That is correct.

Q So if you had a mill in an area where there was, let's say it was in the soy bean area of the country, your application of soy bean use would be different than it would be in another area where it was a scarcer item?

A. Well, soy bean may be a poor example. That is commonly used throughout the United States, but what you are saying is essentially true. We would use different grains or different ingredients depending on what part of the United States we are in. However, the nutrient specifications for a specific product would always be met, but they could be met by a different combination of ingredients.

Q We are essentially a dairy country here in Vermont. Is there a difference in formulating dairy feeds and chicken feeds?

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A. It was introduced in March and April of 1971.

Q And, what percentage of the poultry feed that you manufacture is according to the Life Cycle formulation?

A. We produce approximately a million tons of general poultry rations, laying rations, within a year, and I would suspect that--again, I don't think the year end figures are here, so I don't know the exact amount, but I am estimating about 85 to 90 per cent.

Q And, in your association with that program and the number of tons that has been produced, are you satisfied that this is a successful program?

MR. DAVIS. We object, your Honor, to the question as framed.

THE COURT. Sustained.

Q (By Mr. Divoll) How many tons of feed did you testify that you were manufacturing under this program?

MR. DAVIS. We object to that, your Honor.

THE COURT. What is your objection?

MR. DAVIS. Well, I don't understand its relevancy in the first place, your Honor. We are talking about this case, and this case only.

THE COURT. We'll take the answer.

A. We have produced approximately a million tons of laying rations per year since I have joined the Ralston Purina Company. This is only domestically.

MR. DIVOLL. You may inquire.

CROSS EXAMINATION

Q (By Mr. Davis) Doctor, we were trying to find out yesterday from Mr. Gauthier about this Pro-lay Program. I assume you would be familiar with that, is that so?

A. Yes, I am familiar with the Pro-lay.

Q Can you tell us then, Doctor, what difference there was in that Pro-lay Program and the Life Cycle Program?

A. When you are asking the question, I want a clarification of the question. When you are asking the question, are you talking about just the laying portion, or the total program?

Q Are there differences in both areas? Are there differences in the growing portion of it?

A. Yes.

Q Tell us about those first, then.

A. The Life Cycle Program, we had conducted a number of experiments trying to improve the balance of amino acids and so come up with rations that would more nearly meet the bird's requirement at specific energy values and be able to produce rations which would be able to raise pullets at a lower cost. To this end, we developed a three-feeding program in which we used a starter from zero to six weeks of age, and that is a minimum 18 per cent protein guarantee. We had a growing, a Growena Number 1 from six to twelve

weeks with a minimum protein guarantee of 15 per cent, and a Growena Number 2 which was to be fed twelve to twenty weeks, or 5 per cent approximate production, which had a number of 12 per cent guarantee. On the other hand, in the older program was a Starter which was 18 per cent protein guarantee and that was fed through eight weeks of age, and then we had one, one product feed, normally from eight to eighteen weeks, which we called Pullet Developer. This was a 13 per cent protein ration. There was a second ration fed from eighteen to twenty-two weeks which was a higher calcium ration to be fed to birds just before they started to lay. In other words, the primary differences were the three different products that we had in the time span they were fed the energy levels involved, and there was some change in protein. In one case we increased it and then in another case decreased it for a period of time, and the deletion of a higher calcium ration during the last stages of the growing period.

Q With respect to the laying cycle, the laying year weeks of a bird, were there changes in two programs or differences in the two programs in that area?

A. Yes, there were. We had a number of experiments on the amino acid requirements of a bird and research is always an on-going thing, so we are trying to update and put in the most advanced information so we changed the amino acid

equirement of some; we could lower some others; we in-
reased and put in a greater margin of safety, and we
hanged the tag guarantee; therewas a deletion of some
roducts from the old program to the new program. Roughly,
hat is it.

Q You have told us the generalities, can you give us the
specifics as to how you changed the two programs from the
Pro-lay laying feeds? What changes were made in the new
program, the Life Cycle Program?

A. I thought I was being relatively specific. What else
do you want?

Q You didn't say about percentages of any of these things
as you did with regard to the growing years. You talked
in the growing phase here, or years, about changes in
the protein content of the feed when the bird got to be 8
weeks old under the old program, and 6 weeks old in the
new program and so on. Did you do that with respect to
the laying cycle?

A. We offer a number of---

Q Did you do it, Doctor, with respect to the laying cycle
in the new program?

A. What was the specific question?

Q Change the protein content.

A. Well, the protein content in each of these rations is
extremely variable. I can't answer that specifically.

It would vary from one ration to the next, whether it was Pro-lay or Mild Temp.

I am asking about the differences now, Doctor--you told us about the differences with respect to the growing weeks. I am asking you now about the differences in the laying cycle, if there were any. Were there any?

A. You are asking whether there are differences in the protein content of our rations during the laying cycle? Yes.

A. The tag guarantee on several of these products changed the protein tag guarantee. In Pro-lay, we had a minimum Mild Temp ration; we had a minimum of 15 per cent. There were other rations that were similar that had a 15 per cent minimum guarantee. We had a product called Pro-lay Cool Temp, a 13 per cent protein ration, and we changed the other rations, the L.C. Layenas to a minimum of 14 per cent protein tag guarantee, but the actual protein content of the rations for both the products would vary for both of the programs, rather than the products. They would vary, but never get below the minimum, is that what you are saying?

A. They would never go below the tag guarantee unless there was some manufacturing error, or something like this.

And, so to summarize, Doctor, would I be correct to say that with respect to that ration which has been referred

to as Pro-lay Mild, and comparing that with the L.C. Program Layena-Mild, the difference between the two was in terms of protein; at least, that the old formula resulted in a minimum guarantee of 15 per cent, and the new ones had a minimum guarantee of 14 per cent protein?

A. That is correct. We are talking about tag guarantee changes, that is right.

Q Now, you spoke in some of these recent answers to my questions about amino acids and balance, and experiments, that apparently Purina had conducted as a result of which you concluded, apparently, there wassome sort of an improvement in the ability of Purina to balance these substances?

A. I indicated that we changed some of our standards to the Life Cycle Program, yes.

Q But, these changes resulted from some research that, apparently, had been done by Purina?

A. By Purina and reviewing others' work, yes.

Q And, that this research had to do with the amino acid balance of the ration, is that correct?

A. I would say it has to do with amino acid balance in relation to the energy content.

Q Did it also have to do with balancing these amino acids?

A. If you want to use the balance in this relationship, amino acids to energy content, yes.

Q That was an important development, as far as you were concerned?

A. It was a change which we felt was going to be beneficial to lowering the cost of per dozen eggs, and I felt this was an improvement from the standpoint of that.

Q In other words, Doctor, these amino acids which I think everybody has said--all the experts said--are the critical ingredients in terms of the protein portion of the ration, they are expensive?

A. Expensive compared to what?

Q Compared to the number. In other words, if you can reduce the number, or amount of this amino acid content of a feed, you can reduce the cost of the feed, is that what it amounts to?

A. No. It is important to have the essential amino acids there at the required amount. It would be ridiculous to lower them to such a point performance would suffer.

Q I am not suggesting that. I am merely speaking of the price per ton of feed, and I am asking you if it isn't a fact by reducing the protein content, you are reducing the cost of that feed?

A. Not necessarily, because you still can buy synthetic amino acids which might be one way of getting amino acids which would have no bearing, really, on the protein content.

Q Are those more expensive?

A. Than what?

Q Would the synthetic amino acids be more costly?

A. It may be the most economic way to supply them rather than using something like soy bean meal.

Q Isn't it a fact as part of this research you did--when I say, "you" I am referring collectively to the research people, you determined you could use some synthetic amino acids in your ration?

A. This is common trade usage of amino acids, yes.

Q And, so what specific discoveries did Purina research people come up with that resulted in this change in the program?

A. Well, we conducted something like twelve different studies.

Q I didn't ask you what studies. I said, what discovery, or discoveries did you people in the Purina Research Department come up with from your research that resulted in the change in the feed program that you described?

A. You are talking about both growing and laying programs?

Q Yes.

A. Well, the changes that occurred in the growing program were changes of amino acid requirement for particular periods. We found we could produce a pullet more economically by using the three-feed program that we had with a knowledge of the amino acids that were required for each

of those three periods.

Q Why did you do that more economically?

A. Because we could use rations that supplied the amino acids at the time that the bird needs them better by using a three-feed program; the amino acid requirements that the birds digest, as I think you were talking about with Doctor Nesheim, and by using a three-feed program and having specific amino acid levels during the growing period that matched the birds requirement, could come up with a more economic production of a pullet.

Q Why can you come up with a more economic production?

A. Because you can match the amino acid requirement of the birds better in the new program than the older program.

Q I realize that is what you are doing, matching the amino acid requirement to the stage of life of the bird?

A. That is correct.

Q Why is it more economic than the old program was?

A. Because you can do it more efficiently; you can give the amino acids that the bird requires.

Q Is it cheaper?

A. That is what I said, it is more economic.

Q Why?

A. Because you can do it better and more nearly match the amino acid requirements.

Q How about during the laying cycle, what research discoveries

came about which resulted in a change there from the 15 per cent down to fourteen?

A. Well, we were able to look at the amino acid requirements of the laying period and conducted a number of studies and made some changes in the amino acid standards.

Q Again, the same thing, the amino acid deficiency, right?

A. "Deficiency," I don't understand.

Q I don't know, I guess it is economic.

A. By furnishing more amino acids to the protein content of the ration, we come up with less costly production of a dozen eggs.

DEPUTY CLERK ATHERTON. Plaintiff's Exhibit "101" for identification is a manual.

THE COURT. We'll take our morning recess at this time.

(Court recessed from 10:30 - 10:55 a.m.)

DOCTOR DAVID C. SNETSINGER resumed the stand for further cross examination.

Q (By Mr. Davis) Doctor, I would like you to look at Number "101" which is two sheets of paper clipped together. Could you tell us what they are, please? (Handed to the witness)

A. This is an article I have written on NUTRITION FOR EGG STRAIN PULLETS. I have forgotten which specific magazine it occurred in, but it was from a presentation that

* * *

Q Have you seen any records of the birds in Complex "A"?

A. Production?

Q That were there in 1970?

A. Production records or feed consumption records, no.

Q Or, mortality records?

A. No.

Q Were there any complaints of low production made that day?

A. No.

Q Now, Mr. McLeod, as I understand the testimony, you were the area salesman and were furnishing feed to Mr. LeRiche during the period of time under discussion; whether or not you furnished a continuous supply of feed to the different buildings that Purina was feeding?

A. Did we furnish a continuous supply?

Q Yes.

A. To the complex. Well, we'll say one, two and three?

Q Right.

A. There would be occasions that we would be told not to put any feed in either Complex one, or two, or three, which might last for ten days to two weeks.

Q So there were lapses on occasions of ten days to two weeks when no feed, at least Purina put in no feed in those houses?

A. That is right.

Q And, would these occasions follow certain requests made by Mr. LeRiche?

A. There was one request made by Mr. LeRiche which we could not fulfill under the law, and, therefore, we didn't put no feed in the house. After that there was some more occasions we were told not to put feed in this house, or that house.

Q So how many times can you say when you did not furnish feed?

A. This is a ball park guess, but half a dozen or more.

Q And, over how long a period would it be that you were not furnishing feed?

A. Anywhere from seven days to fourteen days, I'd say.

MR. DIVOLL. You may inquire.

MR. DAVIS. I haven't any more questions.

THE COURT. All right, Mr. McLeod.

MR. DAVIS. I would like to offer Plaintiff's "1," your Honor before we rest. I think that is up there on the witness stand.

MR. DIVOLL. No objection to Plaintiff's "1".

THE COURT. Plaintiff's "1" is admitted.

(Plaintiff's Exhibit "1" was received in evidence.)

THE COURT. Does plaintiff rest at this time?

MR. DAVIS. Yes, your Honor, we rest.

(Plaintiff rests at 1:30 p.m.)

THE COURT. Ladies and Gentlemen, we'll excuse you for a few minutes, and I will stay on the bench and

* * *

Q Yes.

A. We might have been talking about the second batch that went to Dostie in 1973. This last time, we raised them at Ducharme and some at Eldridge.

Q And, they went over when?

A. In 1973, just last year.

Q What time in 1973?

A. September.

Q We are not concerned with those here, are we?

A. No. This one that was there in 1971 were all raised at the Eldridge Farm.

Q Now at some point an addition was made to the Dostie flock that we are concerned with?

A. Right.

Q When was that?

A. I put down here these cages--I am talking about Dostie in Maine--were all filled up before molting on September 13, 1972; birds were from "C" Building; Complex "C".

Q I show you Plaintiff's "31" and on the second page thereof you have down here, it is in different colored ink, "move from C, 5,980 birds," is that correct?

A. Right.

Q Have you any idea as to the age of those birds?

A. I think those were when at the "C" Complex we had bad vaccine on the neck. The birds in Complex "C" grew some

kind of tumor in their neck, and they actually replaced some of these birds; they gave us 4,000 layers; I mean, pullets ready to lay, and so they were about six or seven months younger than the one already there. So those other birds, because they went down laying, those other birds we move to Dostie.

Q And, that was the next question. There was some testimony that you received some pullets because of an error in vaccination?

A. Right.

Q Where were those pullets received from?

A. From the hatchery. I don't know, I think it was the egg hatchery; the Hecht Hatchery.

Q About what age did you receive them at?

A. You mean the baby chicks?

Q No , the replacements.

A. Well, they must have been around twenty weeks old. I put down here they started July 28th of 1971, H & N adjustment, white birds, and they were supposed to be 12 months lay on July 28th of 1972, so in July 28th of 1971 they would have been twenty weeks old, and I believe that is the time we received them.

Q Now in the "C" Complex would be what we call the C-2 Flock?

A. I am not sure. C-1, I would think.

Q I show you Plaintiff's "16" and "17". One is the chart on

* * *

Q Birds just coming into the laying stage do not produce as well as the older birds for the first three or four weeks, do they?

A. Right.

Q Now does your chart on this reflect the addition of these young birds into the old flock?

A. Well, by my book I don't know exactly when we received them. I know they were supposed to be a year late in July of 1972.

Q My question was, does this chart that goes with this flock reflect the addition of the younger birds?

A. Well, I can't tell by this chart really. We received about 4,000 birds and the whole building is 33,000, I guess, so it would be a very small amount compared to that. It couldn't have been a big problem with 4,000 birds compared to 33,000; it couldn't have been a big drop.

Q The first week they didn't lay anything, you would get a drop of a substantial amount of eggs, wouldn't you?

A. Not really, because the other birds were already dead. I mean, the curve would be down already. The other birds were dead and so they couldn't lay.

Q But your chart takes into consideration the mortality?

A. Yes.

Q So if your birds were dead, this reflected it?

A. In there, yes, probably. (indicating to a document)

Q I do notice in the chart a rather substantial dip in July and you think that is when the birds were added?

A. Right.

Q And, in figuring the damage that you figured the other day, I understand you went by the production records on this chart?

A. Right, but we also went by the amount of birds we had there.

Q I don't question that, but as against the normal at that period of time, the other birds were running well along in their laying cycle?

A. Right.

Q And, the new birds wouldn't be expected to lay the same rate as the old birds in the first three or four weeks?

A. Right, but I think we took that into consideration when we took the birds that went there and add them up.

Q That is what I am trying to arrive at. Did you take it into consideration?

A. I am pretty sure we did.

Q Your chart doesn't reflect it, does it?

A. I couldn't say, really.

Q Well, there is this drop here? (Indicating)

A. Yes, but it is up and down.

Q If your damage was figured against this chart, then you didn't?

A. There is another big drop a few months, a couple months after, but this drops up and down.

Q And, the birds that were transferred to the Dostie flock were the birds that you received from the---

A. Replacement.

Q And, they stayed in the Complex "C" flock as young birds for a period of time and then they were transferred to the Dostie flock?

A. Right, they were there about five months, probably. I am not sure about that.

Q You don't know under what conditions those birds were grown prior to their receipt?

A. No.

Q And, you don't know whose feed fed them, or anything?

A. No, we don't know.

Q Now, just a couple of other questions in reference to other flocks. At the time you started in the complex, what other flocks did you have in existence?

A. I am not sure. I believe we had some layers from Purina at the Eldridge Farm, but I am not positive of what we had then. I know we had the one we feed on Pease grain at homosote. We already had those, I am pretty sure.

Q Had you had some other layers in the second building at the home farm?

A. We probably were raising birds down there because I

* * *

of feed Friday or Saturday," or if it happened to be on a Thursday. So I would say probably 50 per cent of the time I would tell the warehouse to bring the feed, and the rest of the time Mr. Dostie would fifty or sixty per cent.

Q Did some problems develop in this flock of birds?

A. Well, we had two occasions when the birds lost feathers to a degree, and the egg size got small, along with a natural decrease in the number of eggs.

Q First, can you give us an indication when these birds were placed in the laying house?

A. Well, they were placed either at the very last part of September after I was up there. I was up there two or three weeks in September, but not assigned, and the majority of them were in place, I would say, around definitely by the second or third week in October.

Q What kind of feed was being fed to them?

A. Well, unless--perhaps I am not sure on this, and the only way we can check is check invoices. There may have been a couple of loads of some type of pullet feed at the very first when they were there during the first couple weeks, but after that, the birds were maintained on 18 per cent laying ration.

Q This was at the very start of their laying cycle?

A. Yes.

Q Now, you started to tell us about some problems. Would you

tell what the problems were and as far as you can remember, when they occurred?

A. Well, the first time we had any kind of a problem as far as the egg size, or feathers that were lost, they seemed to lose a large number of what we refer to as "pin feathers," and we had a lot of small feathers around the house, and the egg size did get smaller. This lasted about a three or four day period, and the egg size started to improve again, and the birds seemed to stop losing their feathers and grow new ones, and on the second occasion, it seemed to be--which was about six weeks later after the first time--the birds lost a large number of feathers; some of their primary wing feathers were gone and the egg size decreased again, and they were a little slower coming out of this production.

Q And, you didn't give us the approximate date, if you can remember.

A. Well, I believe the first time was around the first of March, and the second time about six weeks later.

Q There has been evidence in this case that some birds were taken to the University of Maine. Can you remember whether this was in relationship to these problems that occurred?

A. Well, the two particular problems I just mentioned were, as I had said, loss of feathers and egg production.

* * *

were added?

A. Well, as Mrs. LeRiche testified earlier this afternoon, they did refill the house prior to molting in September of 1972, and I also believe now, and I am not 100 per cent certain about this, but I do believe they added some birds in June of 1972, because the house was never full. Mr. Dostie had complained about this. He had a short row of cages on the back side of the building that had never been filled. When the birds were first put in, there were about twenty-five hundred birds under capacity, and he was supposed to be paid when the house was full, and it had never gotten full, and I do understand after a little while, Mr. LeRiche rectified the situation and did give him full pay, but I do believe, I think in early June they brought in enough birds to fill up that row.

Q Can you remember enough to tell us what birds they were?

A. That they brought in there?

Q In June.

A. Older birds already in production, and I believe--I don't know if Mr. Dostie told me or the truck driver told us that the birds in there were picked out of the flock that was going to be marketed, I believe.

Q What type of bird was brought in at a later date?

A. Later date?

Q Right.

A. Older birds; again, prior to molt.

Q Were they molted along with all the other birds?

MR. CLEARY. If you know.

MR. LIBBY. If I know they were molted?

MR. CLEARY. Of your own knowledge.

A. Sure I know; I was there during the molting program.

Q (By Mr. Divoll) How long were they there before being molted?

A. Oh, a couple of weeks. This is a rough guess right now.

MR. DIVOLL. That is all.

RECROSS EXAMINATION

Q (By Mr. Cleary) How did the birds look going into the cages?

A. You mean physical size and things like that?

Q Were they plump?

A. There were some birds I would call good size, and then there were some very small birds.

Q Do you know how a bird should look going into a cage?

A. I have an idea. I think I can form my own opinion as to whether the bird looks good or not. I think as I told you in my deposition, I don't know if they were supposed to weigh four pounds or two pounds.

Q Would it be safe to say you don't know exactly how much they should weigh, but you would sure know enough if they had feathers?

Q After you graduated from veterinary school, what did you do?

A. I went to work for a gyrogenetics company in New Jersey.

Q For how long?

A. Until 1966, six years.

Q What kind of a company was this?

A. Gyrogenetics, distilation of liquid air.

Q And, you left their employ in 1966?

A. Yes, sir.

Q If my addition is correct, you went to work for Ralston Purina at that time?

A. Yes, sir, September.

Q When you started with Ralston Purina, what was the nature of your work?

A. I was a management trainee at Wilmington, Delaware chow plant.

Q Give us the history of your work with the company.

A. Well, after six months training period at the Wilmington chow plant, I was assigned the position of Quality Assurance Manager and held that position for approximately a year and a half. At this time, I transferred to the St. Louis office.

Q What did you do in the St. Louis office?

A. Manager of chow complaints.

Q Since you have been in St. Louis, have you been in that position?

A. Yes, sir.

Q Now, what does the work consist of?

A. Basically, when there are problems in the field which are directly related to feed, or alleged to be directly related to the feed, and if no decision can be made that it is, or is not directly related to the feed, a sample is sent into the St. Louis laboratory, or to me, for analysis.

Q Explain when you say, "directly related to the feed".

A. Well, there are obviously other problems which can be encountered in the management of animals, and in most cases, of course, it is always the feed. However, there are some times when a problem can be diagnosed in the field by a serviceman or salesman as being some other related factors, such as temperature k too high or low in the house, no water, or some other related problem. There is still a complaint, but it is not feed related, and it is settled that way.

Q Now, obviously, in the manufacture of this type of product, certain things can occur, and I am referring to specifically along the line of metal getting into the feed. Do you call this a complaint in relation to feed?

A. Yes, sir.

Q But, is it a specific complaint or a general complaint?

MR. DAVIS. He is referring to some document, your Honor, or just what is it?

* * *

that point.

THE COURT. What do you propose to show by that?

MR. DIVOLL. Only that the feed was as represented to the producer; that the formula that was given had the formula that contained the ingredients to make up the formula within the standards as proposed by Doctor Snetsinger, as he testified.

THE COURT. What do you say as to that?

MR. DAVIS. To an extent, that is correct, your Honor, but as it relates to the question of amino acids, there is nothing in the reports that I saw with respect to that. That is all I am saying.

MR. DIVOLL. Let me ask him about amino acids. I don't know; in the reading of the complaint you were complaining about the quality of the feed in respect to its specific quality, and not in respect to the job it was doing.

MR. CLEARY. Negative.

MR. DIVOLL. This is strictly for that purpose. I asked the witness as to whether he could testify in respect to the amino acids from his analysis, and he said that he could; that the amino acid analysis is not contained in the report because this is a very highly secretive analysis that they do not divulge in their reports, and will not divulge. It is a trade secret that is vital to their feed program, and

I think to most closed formula corporations, so he could not testify. I will put it this way; he can testify as to the amino acid contents--this is not in the presence of the Jury--that he did determine them, and that they were within this formula, but that he will not testify as to what they were and they are not on these reports.

MR. DAVIS. I think we object to all his testimony on the basis there is no way we can adequately meet that without knowledge of the whole picture. In other words, what I am saying, your Honor, is that he is testifying to a conclusion and counsel, as to what he found, and counsel is saying we aren't going to be allowed to get any information to what he was looking for, or what he, in fact, found.

THE COURT. I think this is a risk that counsel for the defendant takes. If counsel wants to get into this area, that is the risk he takes, and we'll let you get into it to any extent you want. This witness will have to answer; if counsel wants to protect the trade secrets, it is my feeling he shouldn't get into an area where there are trade secrets. This is a court of law and has something to do with the trial. I will let the plaintiffs go into it as mush as he wants.

MR. DIVOLL. I can appreciate the Court's position, and I am sure he can appreciate mine.

THE COURT. I do, but it is a calculated risk your client is going to have to be prepared to take.

* * *

and it can be determined, but it changes with the energy content, and so if you asked him what the standard was, he could not tell you because it depends upon what the energy content is, and the energy content depends upon the ingredients that are in there.

MR. CLEARY. Mr. Schobel instructed the witness he will not answer anything.

MR. DIVOLL. Counsel from St. Louis has talked with the employee from St. Louis and this is a company policy and---

THE COURT. It is a risk they have to take; if you want to get into this area, fine, but that opens up the door for the plaintiff on cross examination.

MR. DIVOLL. My problem was I opened it, and it isn't my problem. My position is I opened it with Doctor Snetsinger, and I assumed he would follow it and could explain it. I can't explain it, and this gentleman can't explain it.

THE COURT. It is my understanding that Doctor Snetsinger said you cannot determine the amino acids in a sample of grain; that is the way I understood it. Imay be wrong. That is going to be my ruling.

MR. DIVOLL. We understand, and one we expected.

(End of discussion at the bench.)

Q (By Mr. Divoll) Mr. Marsh, as head of the Complaint

Department, was there any complaint made concerning formulation of feed coming through your office?

MR. DAVIS. Object, unless it is more specific. What is meant by "complaint". Is he referring to customer complaints or district office memoranda, or what is he referring to?

THE COURT. We think this is a preliminary question and we'll take the answer.

A. (To the reporter) Can I have the question please.

(The reporter read the pending question.)

A. Yes, that can happen just as fundamentally as the product manufactured correctly.

Q (By Mr. Divoll) And, any such complaints would come through your office?

A. Yes, sir, it most likely would.

Q And, would you tell us whether any complaints, in relationship to the formulation of the L.C. Program Layena, was filed with you?

MR. DAVIS. Objection, unless it relates to this case.

MR. DIVOLL. Maywe approach the bench.

THE COURT. Yes.

(At the bench.)

MR. SCHOBEL. In their pleadings and in the very pretrial conference order, negligence of manufacture

was alleged. Now, I assume this means negligence of manufacture is no longer an issue in this case?

THE COURT. What do you say as to that?

MR. DAVIS. As to the question of what the proper level of amino acids being in the feed, you mean? Is that what you are referring to?

MR. SCHOBEL. I think what his reports show is that the feed was prepared according to the formula.

MR. DAVIS. I think I would stipulate to the extent, if you wanted to, I would have to discuss it with Mr. Cleary, but as far as we know, there is no claim here that the protein level in the feed was not equal to that represented on the guarantees., but as far as the amino acid balance is concerned, we made no such concession.

MR. SCHOBEL. You will have to prove it.

MR. DAVIS. We can't prove it except by inference, and that is what we tried to do with Doctor Nesheim and Doctor Snetsinger.

MR. DIVOLL. Then we have to disprove it by inference.

MR. DAVIS. But as far as getting involved in this, I can't see how you can do it.

MR. DIVOLL. We agree.

MR. SCHOBEL. Whether or not the feed was manufactured according to the manufacturer?

MR. DAVIS. As to the protein there is no evidence other than as represented, and we make no claim, because we have no evidence. We haven't supported any evidence. Does this straighten it out?

MR. SCHOBEL. Yes.

MR. DAVIS. Except as to amino acid balance.

MR. SCHOBEL. All right, only you can't prove it, and we can't deny it.

(End of discussion at the bench.)

THE COURT. I think we will excuse the Jury, Mr. Divoll. Ladies and Gentlemen, we seem to bump into legal problems here, so we will take our evening recess at this time. Mrs. Bartlett and baby willing, we will try to start at 9:00 a.m. in the morning. We'll stand in recess. I will see counsel in chambers, together with the reporter.

(In chambers at 4:15 p.m.)

MR. DIVOLL. I think it is a basic problem here whether evidence in reference to lack of complaint is admissible, and we intend, if allowed, to show that we manufactured X number amount of feed, and that which was made for a specific purpose, and that we had no complaints except from Mr. LeRiche in respect to that type of feed, and we have briefed this, we think, fairly thoroughly, because we think it is an important part of the defendant's case here. The evidence to date, of course, is mostly of Doctor Snetsinger that after much research

they came out with this program, and that they have sold or sell about a million tons a year, and if we are allowed to show that there were no complaints, then it certainly is an inference that Mr. LeRiche's feed must have been well manufactured for the purpose for which it was designed.

THE COURT. Well, I didn't understand this is what you were getting at by your earlier questions, but do I understand that all complaints of any type or nature having to do with--we'll just confine it to poultry feed--go to this gentleman?

MR. DIVOLL. All of them. I will put it this way, any of sufficient magnitude. They go by degrees of magnitude, and we intended this as the opening one which is the biggest one, and we intended to work from there down to show there were no complaints. I will make this offer; this is from the whole United States, with the whole United States manufacturing. I think Doctor Snetsinger said a million tons a year; that there were no complaints. Then we intended to come to the St. Johnsbury plant to show what they manufactured, and that there were no complaints in the St. Johnsbury plant.

THE COURT. What do you say?

MR. CLEARY. First of all, your Honor, there is no way I can construe in the pretrial conference order with respect to issues of law to be decided, that this was handled in any way, or even approached in discussion.

THE COURT. I am quite sure there isn't an issue of law. I think it is an evidentiary problem. I want to hear what you have to say about whether or not other complaints can be shown, or lack of complaints may be shown?

MR. DAVIS. I assume, your Honor, that the Purina Company has plants all over the world, right?

MR. DIVOLL. Right.

MR. DAVIS. We are talking about complaints on the part of the St. Johnsbury mill, is the one thing possible with the exception of the fact if you get involved in that, we may have counter with availing proof; if you want to open up that question it will extend this trial a couple more months.

MR. DIVOLL. If that is necessary.

MR. DAVIS. I can see wherein you can put together complaints relating to the program and the feed, as we have our case. It isn't clear now, but assuming the possibility you don't understand what we are saying, we are saying that your program includes a growing program for the chicks, plus a laying program; that according to the evidence, the laying feed is satisfactory as long as it goes with the growing program, but it is not satisfactory--this is what Mr. McLeod said--it is not satisfactory to use a low protein laying ration unless you have used a growing program for that purpose. Now if you want to talk about complaints under the circumstances, okay, but I don't think you can limit it in this case as to whether

or not the feed was not manufactured in accordance with your formulas.

MR. DIVOLL. We get back to--apparently, your position as I understand it now is that there are two programs here. In our work on this case, we had always assumed it was as Mr. LeRiche testified, that it was a new program that they had out, and that was the Life Cycle Program, and when we finally nailed down that was not even in existence until some months after he testified he started on it, then he has come to a new program, and the evidence on that, it wasn't a new program. It had been in existence some nine or ten years. Now we want to show that, at least insofar as the Life Cycle Program, and I haven't gone into the other yet, that didn't even start to materialize; until McLeod, There have been no complaints on the Life Cycle Program.

MR. DAVIS. Mr. Divoll, I think maybe we are disagreeing because we don't think in terms of what is the program. The program, as far as I am concerned, includes everything that goes on in terms of feed, growing the chicks, and feeding the chicks from the time they go into the laying cages, and it is not just limited to the product of feed, itself. The program, to me, is the whole spectrum of the thing, not just the feed, if you follow me.

MR. CLEARY. Additionally, there is no evidence I don't think, your Honor, that he was ever on an "L.C. Program".

There was some problem with what Mr. McLeod recommended at 14 per cent, but if there is no complaint on the L.C. Program, I fail to see how it is relevant in this case since we are talking about a total program.

MR. SCHOBEL. I think the testimony will show there is no formula problems over the last five years; no complaint about the way our feed is formulated.

MR. DAVIS. Our only complaint with respect to feed, as I indicated earlier, we feel there is evidence in this case, if you want to think backwards from the results of the program, to indicate that the amino acid balance was deficient, because we had the results.

MR. DIVOLL. That is exactly why we think this material is important. If it was deficient enough to affect Mr. LeRiche's flocks, why wasn't it deficient enough to affect all the other million tons of feed that was fed?

MR. DAVIS. That is what I mean, you are trying to get in this case the experiences of other poultry people, other producers, which I don't think is admissible.

MR. SCHOBEL. We think if you directly attack our formulas, the fact our formulas worked with over a million tons withother people is certainly good evidence.

MR. DAVIS. That is the point, we don't think you can get into that.

THE COURT. I am not certain that you would

necessarily have formulation complaints, would you? Would the average grower have enough sense to know what might be in the formula if it isn't working right?

MR. DIVOLL. Any complaint that says the chickens aren't producing, is a formula complaint.

THE COURT. Does this gentleman analyze---

MR. DIVOLL. And one that comes to him, yes, sir.

MR. DAVIS. But his field is to check the formula to make sure the proper ingredients are there, right?

MR. DIVOLL. Yes.

MR. DAVIS. All you are saying, he never, in the last 5 years, apparently, had any complaint which required his getting involved in checking the formulas except this one?

MR. DIVOLL. That is right.

MR. DAVIS. Mr. Gauthier testified he never carried on any complaint of Leopold to the St. Johnsbury mill until he got pushy. Marsh doesn't get complaints when it comes from the producer saying, "I am not getting enough production"?

MR. DIVOLL. That is the top level, if he gets that far. Then we are coming down and we intend to show by the next witness's discussion I have of Doctor Murray, the process of fulfilling this formula that has been devised by Doctor Snetsinger in the St. Johnsbury mill, and so that it is a question of fact for the Jury to show exactly the care and

quality control that goes in to put out that formula.

MR. DAVIS. I don't think there is a problem with the admissibility of that. We are not talking about that. We are talking about the complaints this man did, or did not, receive.

MR. DIVOLL. This is just the top level of the complaints, and we think this is admissible because this goes to the ratio of a million tons a year.

MR. DAVIS. That is what you would like to argue, but I don't see how you canget it into this case.

MR. DIVOLL. I think this is a legal question, and I think the law supports us in it, and it is a very vital question in the case, I think, essentially, as it developed, and I have always felt this as we prepared this case that this is the vital question.

MR. DAVIS. What you are saying, or what you are trying to say, if the Chrysler Motor people never got sued because they made a certain model car until now, therefore, it must have been a good car?

MR. DIVOLL. There is a difference there.

MR. DAVIS. I don't see it.

MR. DIVOLL. There is a difference. You can put out a million cars and it is a mechanical defect and there might be a bad mechanic. It has no effect other than within the car itself, but the feed is affecting the consumption, in

this case, the chickens and the pullets, and the effect of that feed from a million tons without lack of complaint, to me, is essential evidence that the formula was a satisfactory formula.

MR. CLEARY. How many lawsuits did Purina have in the last---

MR. DIVOLL. None.

MR. CLEARY. Purina has never had a lawsuit?

MR. DIVOLL. Yes, but not on this, but you keep talking about it, and you have kept hunting and hunting for them.

MR. DAVIS. We are not concerned whether Purina had any other lawsuits and other complaints. We are concerned only with this complaint and whether it is justified. You can't prove this is not justified because you didn't have others. That is what I am saying.

MR. DIVOLL. We think our evidence will show he got the same feed as these million other tons.

THE COURT. What do you say caused the condition of low production?

MR. DIVOLL. Do you want me to tell you? Number One, we don't believe their charts are correct; that is the principal one. Number Two is we honestly don't know what caused it, but there was something there at the LeRiche Farm that he did not get good production. We don't think his charts

are that bad.

THE COURT. All your witnesses seem to say management was good; nobody pointed to anything else. Somebody touched on the lighting a couple times, but nothing very specific about that. Assume that the charts are accurate, I don't know how you will establish what the cause was.

MR. DIVOLL. We don't have the burden to establish that.

THE COURT. I am not saying that is a burden, but as to overcome the plaintiff's case it has systematically eliminated various things---

MR. DIVOLL. I expected Mr. Davis to ask Doctor Snetsinger that. I know what his answer would have been.

MR. DAVIS. He said in his deposition and re-cross examination that he doesn't know what it is.

MR. DIVOLL. That is right.

MR. DAVIS. He admitted you can get low production.

THE COURT. Leave the memorandum and we'll rule on it. What else is there to discuss on the record?

MR. CLEARY. You want formal requests, don't you?

THE COURT. Anything you think merits the Court's consideration should come in the form of a request in writing, with copies to counsel.

(Court recessed 4:30 p.m.)

(January 18, 1974; 9:00 a.m. without the Jury)

THE COURT. Mr. Divoll?

MR. DIVOLL. Your Honor, it will make no difference to the legal principle involved, but it is our intention to withdraw the last question and rephrase it. I have the question written out here that I intend to ask in its place.

THE COURT. All right, withdraw the last question and read to the Court what you propose to ask in lieu of that question.

MR. DIVOLL. All right. We withdraw that question, and we would ask the witness, "Have you received poultry feed samples on complaints involving the nutritional standards of poultry chows," and the second question, "Have you received poultry feed samples on complaints involving Purina's poultry programs?"

THE COURT. I take it the answer to both questions will be, "No"?

MR. DIVOLL. Correct.

THE COURT. Any objection to those questions?

MR. DAVIS. If he says, "No," he will contradict himself. He already testified they got samples from our feed.

THE COURT. I assume he is talking about other.

MR. DAVIS. If he uses the word "other," we object to the questions, yes.

THE COURT. Have you had a chance to read the memorandum of the defendant?

MR. CLEARY. Briefly, your Honor. What we would do is call the Court's attention--perhaps the basic principle is not much different, but the statement of fact is not accurate in the second paragraph, last sentence in the statement of facts. Defendant's would like to introduce in the entire trial the fact no complaints, other than the plaintiff's, have been received with respect to the chicken feed sold in 1973.

THE COURT. Well, I consider that to be---

MR. CLEARY. A typographical error.

THE COURT. We know it covers greater years. Is there anything you wish to say with reference to the memo?

MR. CLEARY. I don't think the Maine case they cite stands for the principle they would like to rely on--the St. Louis case, your Honor. What they were trying to prove in that case on a conversion in a backhanded way, was that the inference that could be drawn from the delivery of the shipment, as I saw the case briefly, could be established by contacting people at the other end of the delivery line and asking them what they received. The ones they didn't ask what they received, they proved by showing that the people who received delivery of an item didn't complain it was not theitem they were supposed to get. I don't think that stands for this

principle at all. It can be clearly distinguished.

THE COURT. Did you find any Vermont cases?

MR. CLEARY. No, but quite honestly, with the other things we had to do, we thought the principle is fairly clear in Vermont. We don't think that evidence, if we can use an analogy of it as to tort cases can be admitted for purposes of proving negligence or non-negligence of either party. It is a negative approach to a positive issue in a case, and we don't think it can be established in that manner.

THE COURT. Mr. Divoll, did you find any Vermont cases on this?

MR. DIVOLL. No, we did not.

THE COURT. I appreciate your candor in supplying the Court with the memorandum which covers both sides of the coin to tell us how it is supposed to convince the Court to rule in your favor, but I am going to exclude this. I don't think this is permissible, and I think it is on the principle of hearsay and relevancy, and in this particular case I also consider that there are, or could be, so many variables upon which the witness would have to base his opinion that it would have little value. The question is not whether complaints were made, but whether or not, in fact, the condition existed as far as we are concerned, and while I haven't been able to study all the cases you cited as much as I would like, I think most of the cases are distinguishable, or at least take the Pullman

Car, the person who claimed she was too cold, the exact situation presented there affected the other people who were in this car, but here, you have people scattered all over the country and all over the world and using different types of feed, or different ingredients in the feed, depending on the portion of the country they are in, and I think it covers too wide an area with too many variables, and I will not permit it.

MR. DIVOLL. We respect the Court's ruling, and our position is that in feed, particularly where the evidence is that the feed affects the birds, that it takes it out; like the woman in the Pullman Car, some people like a hot car, some people like a cold car, so their feelings would differ, but the feed has an effect upon this particular case. That is why we think this case is distinguishable from the rest.

THE COURT. I understand. Even if I was presented with the same questions as far as the Pullman Car was concerned, I probably would make the same ruling as here, but I see little distinction from the factual situation as compared to this case.

MR. DIVOLL. Because we think this is an important factor in defense, and we have a legal principle involved here, that there is much to be said on both sides, we'll ask this question. We expect it will be objected to, and we ask the Court to make the ruling indicated, not only we want to go into the procedure with Mr. Marsh on the stand, but we have one

other witness from the St. Johnsbury plant who will attempt-- who we'll attempt to get in the same situation with respect to him, and---

THE COURT. I don't think it is necessary for you to ask the two questions which we are ruling on at this particular time. So, this is our ruling, and you have the right to appeal at the appropriate time from our ruling, and it may be that is 20-20 hindsight that the appelate court can exercise. We may well be wrong, and you have that right of appeal. I don't see any reason to ask the two questions just to preserve your objection. That is already noted, and you have the objection and the exception.

MR. DIVOLL. And, it is understood that this ruling applies to the testimony of Mr. Eastman who is the complaint man at the St. Johnsbury plant?

THE COURT. Yes. Assuming that you would ask the same questions, in substance, that applies to him equally.

MR. DIVOLL. Now, turning directly to Mr. Marsh, as a matter of procedure, do you want us to put him back on the stand and ask these questions and make a ruling?

THE COURT. No, this is the ruling. You don't need to put him back on, if this is all you want to put him back on for and receive a ruling. You may consider this to be the ruling.

MR. DIVOLL. Fine. We have no further questions

* * *

they showed, and I recommended they treat the Babcock White Leghorns with antibiotics.

Q Now, in your testimony you have mentioned Marek's, enteritis, infectious synovitis, hepatitis and leukosis. Are those diseases that would be, or would be caused by a feed that the checken was receiving?

A. I wouldn't say so, no.

Q Now, referring to Defendant's "M", the 32-week old White Leghorn chickens, Lot Number 5 as shown in the exhibit, were laying hens?

A. Yes. Yes, they were.

Q And, did you mention whether there was any fat on them or not?

A. No, I didn't notice any excessively fat birds.

Q Now, the twelve, 15-week old White Leghorn chickens would be approximately 3/4 of their growing period?

A. Yes.

Q And, did you notice any fat on them?

A. No, I didn't.

Q I show you Defendant's "N" and would you go through the same procedure with respect to that? (Handed to the witness)

A. This first group here was submitted on April 26, 1971. There was seven, 34-week old H & N White Leghorns, Lot Number 5. Four had Marek's Disease, two had visceral leukosis, and one had hepatitis. No other disease was noted.

* * *

with terramycin at the 200 gram level as soon as possible after arrival in Maine." Evidentally, these were going to Maine, this group of birds.

Q And, the twenty-week old White Leghorns would be just as they were starting to go into the laying house?

A. I would assume, yes.

Q Is there any indication of fat?

A. I didn't notice any excessively fat birds in the group.

Q You didn't make any notice of any fat at all, did you?

A. We don't make notice of fat when birds are growing. They all have some fat on them, but I didn't notice any excessive fat. If they didn't have some fat, there would be something wrong with them.

Q So if they had been excessively fat, you would have made a notation?

A. Yes, I would have.

Q Doctor, insofar as you know, covering the period from, I think it is the first exhibit here of November 20, 1970, up until August 8th which was covered in your previous testimony, are these letters the total number of birds that you saw?

A. I would assume they were, yes.

Q At least, you know of no others?

A. No, I don't.

Q All of these which are in Defendant's Exhibit "R", dated

June 9, 1971, there is only one instance where you made any notation of excessive fat, as you termed it?

A. That is true, yes.

Q And, it is my understanding if there had been any excessive fat, it would have been noted on each report?

A. I would have made some notation.

MR. DIVOLL. You may inquire.

CROSS EXAMINATION

Q (By Mr. Davis) Doctor, I want to talk to you about these reports that begin on November 20, 1970 and continue through and up to August of 1972.

A. Yes.

Q And, let's see if we can't get them in sequence first.

A. All right.

MR. DAVIS. Mr. Divoll, you have a copy of a copy attached. Do you want that?

MR. DIVOLL. No, I should have taken it off, I just happened to have duplicates. There is one other set there that has both the original and the copy.

Q (By Mr. Davis) Doctor, first of all, would you separate for us these reports on the basis of whether the report relates to birds that are twenty weeks or older, and birds twenty weeks or younger?

A. You want the reports separated out that way?

Q Yes, would you separate the reports out that way.

* * *

A. This doesn't say; just says White Leghorns.

Q Says White Leghorns?

A. Yes.

Q Now, would you refer to Defendant's Exhibit "R" which is the birds brought in by Mr. Gauthier and how old were those birds?

A. These were 23 weeks old.

Q And, would you give us the estimated hatch date?

A. About six months. No, less than six months prior to this date.

Q December of 1970?

A. Yes, sir.

Q What type of birds were those?

A. These were Babcock White Leghorns, Lot Number 6, it says.

Q Now, on Mr. Gauthier's sample, you did find what you term an excess fatty condition, did you not?

A. Yes.

Q And, on Mr. Morrill's sample, you did not find an excess fatty condition?

A. That is true.

Q Now, if the evidence in this case indicates there was only one flock of white birds born in December, or hatched in December of 1970, would it be reasonable to assume that these birds both came from the same flock?

A. I would say they did; they probably did.

Q And so on the sample brought in by Mr. Gauthier, you found the excess fatty condition?

A. Yes. I didn't say how many. I don't know how many there was.

Q And, on Mr. Morrill's you found no fat?

A. At least, none of the birds I examined showed excess fat.

Q And, if they were both hatched in December, they would come from the same flock, if that was the only December hatched flock?

A. I would assume they would be the same.

MR. DIVOLL. That is all.

RECROSS EXAMINATION

Q (By Mr. Davis) What you mean, as I understand it, Doctor, those birds described in those two reports were hatched at about the same time?

A. Yes.

Q However, you saw one sampling from that flock at an age of 26 weeks and the other sampling at the age of 23 weeks?

A. That is true.

Q Obviously, those birds would have been in laying cages at the time they were brought to you?

A. That is right, yes.

Q And, one group had been in laying cages for three weeks and the other for six weeks, right?

A. Yes.

* * *

Q I think it is August 17th of 1972?

A. Yes.

Q And, you mentioned in the letter there the low production?

A. I mentioned the fact that these birds--I just mentioned the fact that the degree of laying, because this is the main complaint in this particular flock here.

Q Well, this is what I meant.

A. Yes.

Q And, if it had been the main complaint in the other birds submitted to you, would you have mentioned it in your letter?

A. I would expect that I would, but I couldn't say definitely.

MR. DIVOLL. That is all we have.

MR. DAVIS. Nothing further.

THE COURT. Thank you, Doctor.

MR. DIVOLL. Doctor Ragland.

MR. DAVIS. May we approach the bench?

THE COURT. Yes.

(At the bench)

MR. DAVIS. It is our understanding that the Court indicated last evening the Court would allow Doctor Ragland to testify. We were to be given an opportunity to talk to him before he did. We haven't been provided with that opportunity.

* * *

A. Yes, it was.

Q Now, I think you said you went into one of the houses there?

A. Yes, sir.

Q Would you tell us, did you examine the birds?

A. Not taking them out of the cages. We did look at the birds; we observed the birds, and the feed intake, and talked about the birds and their age. They were in egg production, at the time.

Q And, what kind of birds were they?

A. They were White Leghorn type layers.

Q Would you tell us about the condition that you found the birds in?

A. Physically, or on appearance, these birds looked well. Then in discussing the feeding program, I was a little bit alarmed in that the birds weren't in egg production, and the birds were still on a pullet ration, and this is going to have some devastating affect if this is continued when birds come into production. These birds were 24 weeks old, and I don't recall the exact level of production. I recall being shocked in that they were still on a pullet ration. This can have some devastating affect. The calcium level in the pullet ration is not adequate to support egg production, and the bird pulls calcium from their bone system to put around the egg shell and incorporate in the egg shell, and if this continued, over a very short period of

* * *

to go into the poultry house unless you are invited, or there is a problem, or you have a pre-existing problem, or unless the customer thinks you will be of service to him by going into the building, you never go in.

Q Now there has been some evidence here in reference to the so-called Dostie flock that belonged to Mr. LeRiche over in Augusta, Maine. Have you, in your business, visited that flock?

A. Yes, more than once.

Q Can you give us an estimate of how many times, and at what periods of time?

A. It is going to be a guess as to how many times, but I must have been there six or seven or eight times maybe. It is really hard to remember, but I have been there a number of times. The time just before the birds went in I was in the building at Mr. LeRiche's request, and up until the day we molted them on purpose at Mr. LeRiche's request, which would have been a period of about a year.

Q Were you acquainted with the complaint, I guess, in reference to small size eggs and molting?

A. Yes.

Q Would you tell us how those complaints came to your attention, what you did, and what you observed?

A. To the best of my recollection, the first time I heard a complaint from the Dostie flock in Maine was when--and

I don't know who called me first; I think Oliver called me first. Oliver Libby called me first to tell me there was feathers all over the house and there was small eggs and he didn't know what was wrong, and he wanted to ask me if I could help, and he called me up and didn't know what happened. In the sequence of calls, it may be an hour or a day, Mr. LeRiche called me, or I called him--I don't remember who placed the call--but I talked to him, and he was very upset about the Maine flock and the size of the eggs, and the production was down, too. It was down considerably, but the egg size got very small.

Q Did you make a call on the flock?

A. Yes, I went up, I believe, on Sunday with Mr. Libby.

Q What did you find when you got there?

A. I went in, and found, as far as the egg size and the birds and their feathers, I found exactly what Mr. Libby described. I found the floor was white. The only time I have ever seen anything like this before is when you do molt birds. The floor was white with feathers, and the eggs in the tray was very small, like ping pong eggs.

Q From your experience in the poultry business, did you make an estimate as to the cause of this?

A. Yes.

MR. CLEARY. We don't think there is a basis for an expert opinion, as to the cause of the problem with

the flock. Mr. Buswell is a salesman, and that is his background and training.

THE COURT. We'll take the answer.

A. Yes, my opinion was they had run out of water.

Q (By Mr. Divoll) Did you do anything about this problem?

A. Well, when I was there, they had water, but this is what I had surmised had happened from my experience the only thing I could think of that could possibly have been, but I did check all other things and did talk to Mr. LeRiche on the phone, after I had talked to Mr. Dostie. I asked Mr. Dostie if he had run out of water, and he said, "No, I am on the same water supply as my house," which was once the milk room of this converted barn. It is a beautiful place really, and he said, "I run water in the house, and I would know it, wouldn't I," and I said, "Yes, I guess you would," and I don't know the dates or numbers, but at that point I am sure is where one of the accessions is where Oliver took some of the birds up to the university and I checked the house over to the best of my ability, and I could find, at that time, nothing wrong at the time I was there, and I talked to Mr. LeRiche soon after that, and I gave him my opinion they had run out of water, and that was my opinion.

Q Did he give you his opinion?

A. Yes, at that time, I think he agreed with me this was

a possibility, but I think he said something to the effect, "Don't you think Mr. Dostie is a good grower," and I said, "Yes, I do," and he said, "Don't you think he would tell you the truth," and I said, "Yes, I do, but I can't think of anything else that it could possibly be."

Q Was there a second similar occurrence?

A. Yes.

Q Did you go there?

A. Yes.

Q What did you find when you went that time?

A. The same thing, essentially.

Q Did you do anything further about it?

A. I think I did pretty much the same as the other time. I couldn't find anything wrong. Once again, birds were taken all during this period of time. I don't want to go into that, but I think it has been in evidence in this court that birds were taken. Unless you want me to go into it, I don't think it is necessary.

Q For the accession reports?

A. Yes.

Q I think we pretty well covered it.

A. I think you did.

Q At some time, were you called to the complex in Hardwick?

A. No, I requested the visit. I was told before I took over my job as an area sales manager of New England---

* * *

introduce this for the specific purpose that Mr. Divoll has in mind in his offer. I think possibly what might be done is to ask Mr. LeRiche whether from time-to-time he was required to sign acknowledgements where certain medicines were being added to the feed from time-to-time, but in its present state, on the present state of the evidence, I think it would be prejudicial, and we object on that basis. We don't feel that he needs this to substantiate his offer.

MR. DAVIS. Do you claim there is any affect on production by reason of any of the antibiotics?

MR. DIVOLL. No, the only claim we make for these is as indicated by these slips that Mr. LeRiche in most instances, and somebody else in his employ in the others, knew what was being ordered, and what he was receiving.

MR. DAVIS. In all instances?

MR. DIVOLL. In all instances, yes.

MR. CLEARY. For the record also, I understand that you do not make any claim that the hold harmless clause which appears on any of these, in any way prevents the plaintiff from maintaining this action?

MR. DIVOLL. No.

MR. CLEARY. I think we would probably want a special charge on that, your Honor.

THE COURT. No, we'll give it in connection with the introduction of the exhibit. Now, I understand at

this time that the plaintiff is withdrawing any claim for negligence and is relying strictly on breach of warranty of merchantability and fitness for purpose?

MR. CLEARY. Yes, your Honor, and cite in connection with our claim on the breach of warranty basis, the Texon Feed Yard, Inc. v Purina in 447 F.2d 661 (1971).

THE COURT. Anything else we should take up on the record at this time? How about requests to charge? Any other requests to charge other than the handwritten ones that are filed?

MR. DIVOLL. I have two which I am afraid will have to be handwritten ones.

THE COURT. Don't tell me. We'll take them up after we finish the evidence.

MR. CLEARY. We'll submit some, your Honor, but it will be after today.

THE COURT. If it is after today, don't submit them. It is too late. I will take anything today, but I don't want anything coming in Thursday morning. Insofar as the defendant's counterclaim is concerned, the Court proposes to advise the Jury in the charge as to the amount of the counterclaim and the fact that it is due by the plaintiff to the defendant. The Court will then advise the Jury that they need not give any further consideration to the counterclaim, but they should determine the amount of damages which the defendant

* * *

Q And, that would be the basis?

A. That would be the way it usually is, yes.

Q Now there was also some reference to a controlled lighting program. Do you recall that conversation with some of the witnesses?

A. Yes, I do, sir.

Q Can you tell us whether or not you were on a controlled lighting program for all the flocks that were claimed?

A. Yes, we were on a controlled lighting program.

Q I show you now what has been marked as Plaintiff's Exhibits "106" and "107", and would you tell me, and the Court and Jury, what they are? (Handed to the witness)

A. Well, these are the charts made out by the hatchery people that supply the chicks, and it is a chart made out and on the delivery of chicks, they give us the chart.

Q Each time you get a new load?

A. Each time we get the particular chicks. If the chicks come in October, we would have a different lighting system if they were to come in January, for instance. So what the hatchery does is give us a chart for each delivery of chicks that come in.

Q Is this based on their life?

A. On the particular time of year. For instance, now in January if we had some chicks coming in say, this week, today, now the times of day is getting longer, so you

would stimulate the maturity of the birds, because the days are getting longer. So what we would do, we would take the longest day of the year---

Q What do you mean, "the longest day"?

A. The longest day that these particular chicks are going to be subjective of, and we add five hours. This give us approximately 15 hours, and with this, you decrease the light 15 minute a week until they are ready to lay.

Q Is there a different lighting chart for a house with windows and a house without?

A. I do have two houses there is no window at all.

Q This is for growing birds?

A. For growing bird. I only have one house where I got windows, and the other houses, there is no windows in them there is nine hours straight lighting, nine hours straight.

Q With light bulbs?

A. With light bulbs with no windows.

Q How about the house that does have windows?

A. I just explained it to you, sir. Every batch of chicks, suppose they came in the fall, you have a different lighting schedule that you would have than in the spring. That is where the hatchery chart come in and it is standard procedure for them to give us one.

Q Are Plaintiff's "106" and "107" typical, or standard charts?

A. Yes, this one here is just to demonstrate more this one here. (Indicating)

Q Refer to the number, Mr. LeRiche.

A. "107" is the one Jeannine mark in this here. This is her figure right there. (Indicating)

Q So these are both typical charts?

A. Yes, definitely so.

Q Now, we talked about a controlled lighting system. How does it actually work?

A. Well, you have got a time clock. The time clock is automatic.

Q Is this in each house?

A. In each house. Whenever there is a pen of birds or floor, there is a time clock for it, and there is some little digits around the clock, and depending on what you want to do, increase or decrease, you move the digits on your clock. It is really quite simple.

Q Is this what the breeder calls, "step-up" or "step-down"?

A. Step-down lighting system, yes.

Q What do you actually do physically to the clocks in the two houses to control the lighting? Do you adjust the clocks?

A. If you are going io increase the lights, you move the digits to increase it. If you want to decrease it, you move the digits the other way.

Q Who would take care of these?

A. I would normally do it.

Q How about when you weren't there?

A. Jeannine would know how to do this; my wife.

Q Do you have different clocks for the houses with windows than those without windows?

A. They are all the same clocks, standard clocks.

Q Because it is just a matter of time of light?

A. Yes. They might be manufactured by different companies, but all the same thing.

Q Can you tell us approximately when the first time was that you saw Plaintiff's "67"?

A. Here in this courtroom, sir.

Q And, do you have any indication where it came from?

A. I would assume Purina give it to you.

Q Did you ever receive a copy of Plaintiff's "67"?

A. Never seen that, I am sure.

Q You did receive though a copy of Plaintiff's "65," the red book?

A. The one with the picture, yes. That one, yes.

Q Plaintiff's "65"?

A. Yes.

Q Who gave that to you, again?

A. If I recall, Mr. Gauthier one day was in the yard and he opened his trunk. We were looking for something else,

and he handed me that book.

Q Is that the only book that you have received from Purina?

A. Yes. Well, at that time, yes.

Q Now there was some discussion with one of the men from the Purina plant on Plaintiff's "102". Tell the Court and Jury where you found those; those little items.

A. Well, one day the feed company come in from Purina and unload several load of feed into our feed bins, and they had all these particles, these pieces of steel, or pieces of junk, you might say, and when you auger the feed and everything is automatic, a piece of steel like this would create a big problem, because it is in the tube and when it gets caught in the tube, there is no way to get in there and take it out. So they came in one night about, if I recall, it must have been about four or five o'clock in the afternoon, and they work all night to take all the feed out of them tanks to take the feed out to get this piece of metal out of this feed, and they reload all this feed into these trucks, took it back to St. Johnsbury, and the next day they delivered the same feed over again, and they bill me twice for it.

Q Now, how many times did you find these particles?

A. Occasionally, we find them in the box there. Mr. Cleary, Ralston Purina give me a credit for $500 on the feed they brought back, but they admitted they made a

mistake and were going to take care of it. So, I am still looking forward to it.

Q Did you have an argument with Doctor Eldridge on the day he came out to take a look first, at the brown birds, and then the other birds?

A. Well, to answer this question, all these months and all these times and years that I have been telling them about low production and this problem we had been having, finally, I heard Mr. Eldridge was going to come in, so Mr. Gauthier make me aware this man was coming. So really, Jeannine and I, during the week, we talk about it, because it mean so much to us, you know, that this man was going to come in and solve our problem, and finally, the guy arrives, and I took him to the house, the "B" House, where I felt, at that time, my production was at the lowest, and he ask me to go in the house and pick up a few birds, which I did, and he look at them, and I have forgotten who was writing there with a pencil, and he look at the bird, and he says, "Good production," and again speaking, "good flesh, no problem," and the way he was marking down like seemed to be no problem with the birds. After we went through the first birds, I say to myself, "Jeez," I say to myself, "My gosh," because I know the fat was just pouring right out of these birds, and then we went on to other birds, and other birds, and a few more, I think,

and finally, he found nothing wrong with them, so you can imagine for me, this guy is coming to see me; I am taking this guy almost like a "Savior," he come in to solve my problems, and you can imagine the disappointment. I said, "What the hell are you doing here," and I got mad, and I don't want to use the words, and he requested to go in the other houses, and I say, "What for do you want to go in the other house? You won't find nothing wrong anyhows," so this discussion got kind of tough a little bit, and to cool the thing down, we went away back toward my office, and he start talking about that he was going to turn me over to the Claim Department. So, I said to myself, well, maybe if he takes this direction, at least there is some indication that there is some hope there. So we stopped down to my office for a few minutes, and when he got to the office, I said, "Mr. Eldridge, what is the possibility to get these birds back in normal production or something I can live with," and here is his answer; he says, "Mr. LeRiche, you got a lot of holy water around here because you are going to need a lot of it," and I will never forget that, and this was just a few minute after he denied there was nothing wrong with the birds, and he went on to talk some more about the Claim Department.

Q At the time you observed Doctor Eldridge opening the birds, these were the brown birds?

A. Yes.

Q Did you see any difference in the fatty condition of those birds than the brown birds that Mr. Morrill had?

A. They were all the same, they were just bunching with fat, you know.

Q Did Mr. Gauthier ever ask you, specifically, to produce production records?

A. Never asked me, no.

Q Did Doctor Eldridge ever ask you specifically to produce production records?

A. Never ask me, no.

Q Did any one from Purina ever ask you to produce production records?

A. I don't recall any one ever ask me about production, except Mr. Jones one time on the telephone, but at that time I forget what--he says, "We have to see the production records," and he never came anyway.

Q Was this conversation that you had with Mr. Jones, was this after Doctor Eldridge said there wasn't a problem?

A. Yes, just a few days before we brought the action against them.

Q Did you have a problem with egg size back in 1971 and '72?

A. Yes, you heard the testimony of Mr. Buswell and Mr. Gauthier the egg sizes were severely affected by that.

Q Now, let's take birds about 40 weeks. That would be about

18 weeks or so after they start laying?

A. Okay, go ahead.

Q About that time of their cycle, what kind of percentage would you expect on the bigger eggs?

A. Well, I would think birds say, five or six months of production should give us 75 or 70 per cent large eggs.

Q When you say "large, what do you mean?

A. I mean, grade large. You have large, extra large, and medium, and I am saying, large. So the percentage would be extra large and large, and there would be a few mediums, but in this case, we get a lot more mediums than getting large.

Q Do you have an estimate as to the percentage that you were off on these?

A. I cannot give you, no.

Q It would be fairly difficult?

A. It would be difficult because at that time nobody anticipated that I was going to be here today, and, you know, we just didn't keep, we just didn't have no figures.

Q On the various sizes?

A. Yes, you see, but we know that the egg size were very affected, though.

Q What has been your experience on breakage, Mr. LeRiche, in the automatic conveying egg system you have in the new complex?

A. Well, if you pick up the eggs by hand, every egg has to be handled one by one, and your chances to drop a few and crack several, it is a lot greater than if you just press a switch and nobody touches the eggs, and they come in nice and straight into the egg room, but some time, mechanical failure happen and you got 100 eggs that goes on the floor, and these things do happen, but yet, at the end of the year we feel that we are much better off this way than having hand picked.

Q Is it your experience that the losses are less on the automatic than by picking by hand?

A. You repeat that question again.

Q Has it been your experience that the eggs, the egg losses that you have on the conveyor belt system at the end of a year are less than they are by picking up?

A. Yes, I would think so, yes.

Q Did you hear Mr. Mercia testify?

A. Yes. He came to my house, and he did a study, or spent a few days there, and at the end of the egg belt, he is checking the hen house, he is checking 45 degree angle corners at several different points, and I think, if I recall, he found that the eggs were in very good condition, less checks, or no more than there was on the hand picked operation.

MR. CLEARY. We offer Plaintiff's "102," "106,"

and "107" in connection with Mr. LeRiche's testimony, your Honor.

THE COURT. I am excluding "102" as not being particularly relevant to this lawsuit.

MR. CLEARY. Our offer of proof with respect to "102" would be with respect to the testimony of the witnesses of the defendant relating to the quality control and quality inspection, and things of that nature at the St. Johnsbury plant.

THE COURT. Excluded.

MR. DIVOLL. No objection to "106" and "107".

THE COURT. They are admitted.

(Plaintiff's Exhibits "106" and "107" were received in evidence.)

MR. CLEARY. We have nothing further. Thank you, Mr. LeRiche.

MR. DIVOLL. We would like to ask a couple of questions.

CROSS EXAMINATION

Q (By Mr. Divoll) I will try to take up chronologically what you testified to, Mr. LeRiche. First, was in reference to a set of slips that are here. At least, in order to sign those slips, either you or somebody in your organization had to know, or had the chance to know what feed was being fed, isn't that correct?

A. Well, for instance, if Mr. Art Gauthier would have talked to Doctor Murray, for instance, and agreed the birds should go on a 200 gram of terramycin, or amprol, the slip would come in the office and sign the slip, but she wouldn't know anything about it. I might have, but I don't think she would have.

Q Don't these slips tell the grain that it is being added to?

A. Ya, but you realize when you feed that many bird, a truck load of feed it takes in the weeks, months and year, every day I mean, the slips that are involved, it just becomes like I said, a way of life. You are just there all the time, and it is a routine habit. You bring in the slips and they are all the same.

Q The information is there if you want to look at it, isn't it?

A. Yes.

Q Now, I think we discussed about your ordering the feed, once in awhile. Didn't Gauthier get hurt over some period of time?

A. Pardon me?

Q You were questioned about occasionally ordering the feed when Mr. Gauthier was away for a day, or away at a seminar. Wasn't he hurt and absent for a period of time?

A. Yes. Come to think of it now that you mention it, he

hurt his leg one time.

Q And, was gone three or four or five weeks?

A. No, I think to the best of my memory now, I think he was gone about five days.

Q About five days?

A. Yes.

Q And, you ordered the grain while he was gone?

A. Within five days I possibly might have ordered a couple shipment, yes.

Q Now, I am looking at Plaintiff's "106" and "107" which are schedules or light charts that have to do with controlled lighting?

A. Yes.

Q Now, "107" is the chart itself and you say that this was a recommendation of the Dekalb people that were the growers of the chicks?

A. Yes, they would recommend the lighting system if the bird went into a house where there is windows.

Q And, my understanding is that you followed their recommendation?

A. I would say so, yes.

Q And, "106" is the same thing only on a slip of paper rather than a chart for Hecht Hatchery?

A. Yes.

Q Is that what we call the H & N birds?

A. Yes.

Q Is this a recommendation of controlled lighting?

A. It is a duplicate, a demonstration of the idea behind it. In other words, you see what they do, you order some chicks, and they give you a lighting program with a particular time of the year your chicks come under.

Q I see.

A. You know, suppose you buy chicks in the month of May, you have a different lighting program that month of May than you would in January.

Q And, you followed this lighting program?

A. Yes.

Q So when there has been some complaint here about Purina not following and controlling the lighting in the chicks, actually, you, yourself, controlled them?

MR. DAVIS. We object to that question. We never complained about Purina not controlling the lights on the chicks, your Honor.

THE COURT. I don't remember the testimony to be that way, Mr. Divoll.

MR. DIVOLL. If I remember the testimony, one of the complaints is that the chicks weren't grown right because the lighting wasn't controlled.

MR. DAVIS. That is not so.

THE COURT. I will sustain the objection.

Q (By Mr. Divoll) So your position is that you get the controlled lighting recommendations from the grower of the chicks, and that you follow them?

A. From the hatchery.

Q Isn't that the grower of the chicks?

A. Yes. Well---

Q And, that the defendant here has nothing to do with the lighting program?

A. No, this is the hatchery and my doing it. I mean, this is my part.

Q Now, again, do you remember Doctor Hoffman on the stand?

A. I remember he testified, yes.

Q Didn't Doctor Hoffman testify that the pullets went into the laying houses as too fat?

A. He indicated that, yes.

Q And, didn't he indicate that they were too fat because the lighting and the feed was not correct?

A. No, not as I remember.

Q If you were managing the lighting then, you were keeping track of the pullets as they grew to watch how they reacted?

A. What I would do, I go to these houses very frequently, and this is my job, and once a week if there is something to do with the lighting, I would do it, and there is two houses where there is no window at all, so what I do is just set the lighting hours straight, and that is all. I

never touch it until they go into the cage house.

Q The purpose of this was so you would have a good pullet to go into the laying house when they went into the laying house?

A. I would say it is because I follow their recommendation.

Q That was the purpose of the recommendation?

A. The recommendation that I follow the lighting program from the hatchery.

Q And, I think you have already testified how well satisfied you were with the pullets?

A. Yes, they were very nice.

Q I think when you were being questioned about Doctor Eldridge, you made the remark of all these months and years of low production, is that right?

A. I knew that I complained a long time to Arthur and many times, and finally, Doctor Eldridge come to see me.

Q Did you ever complain to the St. Johnsbury office?

A. Yes, I have, sir.

Q You did?

A. Yes.

Q I think Mr. Eastman was the complaint man that was on the stand, and I think he signified no complaints except in reference to the metal was ever made to him.

A. He said himself there was a complaint made to him on account of the metal.

* * *

(Plaintiff rests at 12:00 noon)

THE COURT. Plaintiff rests, and the evidence is closed. Ladies and Gentlemen, as I explained to you on Friday, there has to be a necessary hiatus in this matter. The arguments in the case will probably take some time and so will my charge, and for that reason, and because I have this commitment in New York scheduled long before there was any indication this case would go so long, I am going to excuse you at this time, and ask you to return Thursday morning at 9:30. At that time we will hear the arguments of counsel and I will give you my charge, and you will take the case at that point. All the evidence has been closed at this time, and it is very important when you go into the jury room on Thursday that your deliberations and your judgment be your own. Therefore, I am going to ask between now and Thursday morning you do not discuss the case with anybody, and make certain when you go into the jury room, it will be your own judgment. So, we will stand in recess at this time. The Jury will return at 9:30 on Thursday. I would like to see counsel in chambers, if I may.

(Jury was excused at 12:01 p.m.)

(In chambers)

THE COURT. Mr. Divoll.

MR. DIVOLL. At the close of all the evidence, the defendant moves that the Court direct a verdict in its

favor on the grounds that taking the evidence, as a whole, in the light most favorable to the plaintiff, that they have failed to make out a case of sufficient facts and circumstances to submit to the Jury.

Briefly, on that, it is entirely based upon speculative testimony of Doctor Hoffman in reference to the reason for the birds being fat, and taking his testimony in the conjunction with the other evidence from experts; taking his evidence in the light of the evidence of the other experts, it is highly speculative and not to be depended upon.

THE COURT. We'll deny your motion for the same reasons stated previously.

MR. DIVOLL. The second motion again is a re-statement of the first, but what we think with a little more basis to it, that the Court strike from the case all the testimony and do not submit it to the Jury for damages, any flocks except the three flocks; the flocks in Complex "B", the Dostie flock and I think it is the "C-2" flock, because those are the only flocks from which any birds were posted, and Doctor Hoffman saw only the "B" flocks and the "C-2" flock, and heard, or read the accession reports on the postings in the Dostie flock, but as we remember his testimony, it was based upon the fact that the hens were too fat because they went into the laying houses, as pullets, too fat, and the evidence now in the case is that from the plaintiff, himself,

who testified as to the good condition of the pullets and Morrill has testified as to the good condition of the pullets, and they have maintained that, and then we have all the accession reports of Doctor Murray which shows--I can't recall how many there were, but there were a substantial number all on these flocks in question, in their growing stages from 8 or 9 weeks up through the time that they went into the laying house, or shortly thereafter, and in only one instance is there any mention of any of them being fat, and in that one instance there are other accession reports of birds from the same flock on which there was no mention of fat, and we think that this testimony only adds to the speculation of Doctor Hoffman, and as a basis for his opinion which was that the pullets went into the laying house too fat, and we don't think there is any evidence in the case that such was the case, and we think that Doctor Hoffman's testimony in respect to those flocks is in error, because there is no such evidence in the case, and secondly, it is speculative, especially considering the possible error and the fact that the other evidence in the case contradicts it.

THE COURT. We are going to deny that motion, also.

MR. DIVOLL. We had a motion for a directed verdict on the defendant's counterclaim, but this morning we discussed that, so we make no such motion.

* * *

As far as your damage claim, the chickens failed to produce at an improved level and the plaintiff must first establish that they failed, this one doesn't make sense, Mr. Divoll.

I am going to charge that the damages in the case are those eggs which had to be purchased because the chickens produced at a level lower than that which the plaintiff had reason to expect they would produce.

MR. DIVOLL. If they believed they failed to produce.

THE COURT. Right.

MR. DIVOLL. No problem there.

THE COURT. And, punitive damages, I will not charge.

If there is nothing else at this point, gentlemen, I will look at these and make a determination on expressed warranty.

(End of motions and discussions in chambers.)

(Court recessed at 12:40 p.m.)

(January 24, 1974; 9:30 a.m. in chambers)

THE COURT. I thought I ought to get you in here for two reasons. I am not sure we put it on the record, the possibility of strict liability in this case, whether or not it applied. We discussed it at the last pretrial conference and counsel were going to file memoranda if they thought it

applied. None were filed, and there is nothing in the pleadings, so we won't consider it.

MR. DAVIS. I think I discussed that with you in the course of another case, and we decided not to pursue that approach.

THE COURT. Right, and I have spent some time reviewing my notes and the law and the exhibits as far as expressed warranty is concerned, and while I will listen to you further, if you want, I reached the conclusion I don't think this rises to the level of expressed warranty. Plaintiff's Exhibit "65," which is thepoultry book was given long after that conference, and quite casually, according to LeRiche, by Gauthier, who reached in the trunk and pulled it out. Plaintiff's "67," Mr. LeRiche said he never saw; "87" wasn't introduced with the thought of what was on the back. There was no discussion as far as that was concerned, but there is nothing in the evidence to indicate Mr. LeRiche was relying on anything on the back of this.

MR. DAVIS. I think there was testimony from this witness this program was designed for the purpose of providing maximum performance and it was the best in the country. There is only one company that knew any more about it than they did. Maybe it is just puffing.

THE COURT. I don't dispute this, but this was testimony, as far as I am concerned, from the defendant's

witnesses, and I don't see the necessary reliance on it by Mr. LeRiche, or the fact that he ever knew of it in order to make it a basis of a bargain and rise to the level of expressed warranty. So, I am not going to charge it.

Anything else before we go into court?

MR. DAVIS. I guess not.

(End of discussion in chambers)

(In full court at 9:40 a.m.)

THE COURT. Good morning.

JURY. Good morning, your Honor.

THE COURT. Mr. Davis, or Mr. Cleary, are you ready to proceed?

MR. DAVIS. We are, your Honor.

THE COURT. You may do so.

(Mr. Davis summed up to the Jury on behalf of the plaintiff.)

THE COURT. I think we will take a short recess at this time.

(Court recessed from 11:05 - 11:20 a.m.)

THE COURT. You may proceed, Mr. Davis.

(Mr. Davis continued his summation to the Jury on behalf of the plaintiff.)

THE COURT. Mr. Divoll.

(Mr. Divoll summed up to the Jury on behalf of the defendant.)

* * *

CHARGE

COFFRIN, J. Ladies and Gentlemen of the Jury:

I am going to appoint Mrs. Dowling as your forelady.

This is a civil action to recover damages allegedly suffered by the plaintiff, Vermont Food Industries, Inc., as a result of lowered egg production in certain of its chicken flocks which it claims was caused by the feed and feeding program furnished by defendant Ralston Purina Company. Plaintiff alleges that the defendant breached warranties that its feed and feeding program were of merchantable quality and were fit for the particular purpose for which they were intended; namely, to obtain the egg production which the plaintiff could reasonably expect from its flocks.

The defendant generally denies these allegations and further alleges that the plaintiff's damages, if any, were caused by its failure to follow the defendant's recommended actions as to the analysis, use and amount of feed fed to the plaintiff's flocks. Defendant further alleges that plaintiff is indebted to it for grain and chickens furnished under an agreement between plaintiff and defendant.

The Court finds as a matter of law that on the date this suit was brought, the plaintiff was a citizen of the State of Vermont and the defendant was a citizen of the State of Missouri.

C-2

All parties in this action are corporations and, accordingly, must act through their agents and employees. As corporations, each is responsible for the acts or omissions of its agents and employees acting within the scope of their employment. So you will bear in mind that such acts of the agents and employees of each of the parties are the acts of that party.

At this time it becomes the duty of the Court to give the instructions of law applicable to your determinations in this case. It is your duty as jurors to follow the law as stated in these instructions and to apply the rules of law so given to the facts as you find them from the evidence.

It is the sole province of the jury to determine the facts in the case. The Court does not, by any instructions given, intend to indicate to you as to how you should decide any question of fact. It is your duty to decide all the facts from the evidence.

As to the plaintiff's claim against the defendant, you must answer the following questions:

1. Did the defendant, Ralston Purina Company, breach its implied warranty that the feed and feeding program in question were of merchantable quality and, if so, was the failure to measure up to this standard a proximate cause of the lowered egg production in plaintiff's flocks and the damages which resulted to the plaintiff therefrom?

2. Did the defendant, Ralston Purina Company, impliedly warrant that the feed and feeding program in question were reasonably fit for their intended purpose because at the time the feed agreement was entered into it had reason to know the use to which the feed and feeding program were to be put, and that the plaintiff was relying on the defendant's skill or judgment to select or furnish a suitable feed and feeding program?

3. If you find that there was such an implied warranty of fitness for a particular purpose, did the defendant breach that warrant and was this breach a proximate cause of the lowered egg production in plaintiff's flocks and the damages which resulted to the plaintiff therefrom?

4. Did the plaintiff fail to follow any instructions, directions, and/or recommendations which you may find were made by the defendant with regard to the manner in which the feed was to be administered to the flocks and, if so, was this failure on the part of the plaintiff a proximate cause of the lowered egg production in plaintiff's flocks and the damages which resulted therefrom?

Now as to the defendant's claim against the plaintiff, the parties have agreed that there was a contract for the supply of feed and chickens, and that the plaintiff is indebted to the defendant, under this agreement, in the amount of $136,750.84. Because of the agreement by the

parties, you need not concern yourselves with this aspect of the case.

Later, I will discuss the questions which you must answer in more detail, but first I must call to your attention certain rules by which you are to assess the evidence you have seen and heard in answering these questions. Since this is the last case and most of you have sat on other cases, you have heard these rules before.

The first rule is the burden of proof. On the questions of whether there was an implied warranty of fitness for a particular purpose, whether the defendant breached this warranty of fitness for a particular purpose, or breached the implied warranty of merchantability, and whether the breach of either of these warranties, if any, was a proximate cause of the plaintiff's damages, the burden of proof is on the plaintiff.

On the questions whether the plaintiff failed to follow any directions, instructions, or recommendations which you may find were made by the defendant concerning the administration of the feed to the flock and whether this failure, if you find it, was a proximate cause of the reduced egg production and plaintiff's resulting damage, the burden of proof is on the defendant.

The burden of proof on the plaintiff's damages, if you reach that question, is on the plaintiff. As to the

amount of money owed by the plaintiff, Vermont Food Industries, to the defendant, Ralston Purina Company, under the agreement, for which the defendant has counterclaimed in this action, as I have advised you, it has been stipulated by the parties that money was due and it has been further stipulated as to the amount thereof; so, as I earlier explained, it is unnecessary for you to make any determination with reference to the counterclaim of the defendant.

The party having the burden of proof is required to meet that burden by establishing his claim relative to the particular question, or issue, involved by a preponderance of the evidence. The phrase, "preponderance of the evidence" means the evidence of greater weight, logic, or persuasive force. It does not mean the greater number of witnesses or documents. It is a matter of quality, not quantity. In other words, a preponderance of the evidence means such evidence as when considered and compared to the opposing evidence, has more convincing force and produces in your mind a belief that which is sought to be proved is more likely true than not true. If the evidence on any issue or question in the case is evenly balanced, then the party having the burden has not sustained his burden of proof on that issue or question, and you should find for the opposing party on that issue or question.

The credibility of the witnesses and the weight

to be given their testimony are questions entirely for your determination. The law is that you are not bound to give the same weight, the same credit, or have the same faith in the testimony of each witness, but you should give their testimony just such weight, just such credit, and have just such faith in it that you think it is fairly entitled to receive.

Consider the appearance of the witnesses on the stand; their candor, or lack of candor; their feelings, or bias, if any; their interest in the result of the trial; their opportunity for observation, and the reasonableness of the testimony they gave, and believe as much or as little of the testimony of each witness as you think you ought to.

If you find that any party to this action--and by "party," I now remind you that the acts of the employees are the actions of the party,--if you find that any party to this action made statements outside of court inconsistent with the testimony in court as to the facts involved in the case, then you may consider such statements as were previously made out of court as evidence of the facts in issue. If you find that any of the witnesses in the action who are not parties made statements outside of court inconsistent with their testimony in court as to the facts involved in this case, you may consider these inconsistent statements only for the purpose of impeachment of the witness and not for the purpose of showing the same to be true.

If you reach the conclusion that any witness in the case has wilfully, or deliberately given false testimony about any material fact, you may reject from consideration all of his or her testimony, or you may accept such part as you may deem true and disregard that which you feel is false.

Where witnesses differ as to what the facts were, it is generally a safer way to reconcile the conflicting testimony, if you reasonably can, upon the theory that all of the witnesses intended to tell the truth. But if you cannot so reconcile the testimony, then you must determine from all the evidence before you which of the witnesses is entitled to the greater credit.

There has been a substantial amount of testimony introduced in this case which we refer to as expert testimony. I am sure you are well aware of those witnesses for both the plaintiff and defendant who testified as experts, and, accordingly, I am not going to name them at this time.

An expert is a person who, by reason of special study, training and experience as to a given subject, has knowledge concerning that subject superior to other people in general. The value of expert testimony, or opinioned evidence, given by an expert depends upon the honesty and ability of the witness, upon the facts used by him as a basis for his opinion, and upon his opportunity for observation. If the facts used by him for a basis are proved, and his qualifications are high,

and he is honest and impartial, and has had ample opportunity to make proper observations and studies, his opinion may be of great value. While if his opinion is based upon a state of facts which the evidence does not sustain, or upon a very limited opportunity to make observations, his testimony may be of little value. Expert testimony is to be weighed by you with all other testimony in the case, and the weight of all the expert testimony in this case is for you, and you alone, to decide.

Any testimony which has been excluded or which has been stricken from the record is not evidence in the case, and you will entirely disregard it in arriving at your verdict.

Likewise, the arguments of the attorneys and any statements which they made in their arguments are not evidence and will not be considered by you. You will render your verdict from the facts as you find them from the exhibits and the testimony of the witnesses. It is your recollection of the witnesses' testimony and not the attorneys' statements which shall control you in reaching your decision.

Keeping in mind these rules by which you are to consider the evidence in this case, we shall now consider the questions which you must decide and the law by which you are to reach your decisions.

The plaintiff's first claim against the defendant is based upon an implied warranty of merchantability. In

this case, the law imposes an implied warranty on the defendant that the feed and feeding program which it sold to plaintiff were of merchantable quality; that is, of fair quality and reasonably suitable for the normal or ordinary purpose for which they were intended and used.

This implied warranty of merchantable quality does not require that the feed and feeding program be perfect in every detail, but only reasonably fit for the ordinary uses for which they were sold.

As jurors, it is your duty to decide from the evidence whether, under the circumstances in this case, the feed and feeding program in question were reasonably fit for the normal or ordinary use for which they were intended and used. If you find that the implied warranty of merchantable quality was not breached, then you must find for the defendant, Ralston Purina Company, on this point. If you find, however, that the warranty was breached by the defendant, you must then consider whether that breach was a proximate cause--as I will shortly define it--of the loss of egg production and plaintiff's resulting damages.

However, even if you find from the evidence that the defendant breached the implied warranty of merchantability, if you also find that the warranted goods were being used by the plaintiff for a purpose, or in a manner substantially different from that which the defendant intended, recommended,

or instructed that they be used and that use was a proximate cause of the plaintiff's reduced egg production and resulting damage, you must find for the defendant on this point. Any instructions, recommendations or directions given by the defendant must themselves be proper and fit for the goods to which they relate.

Breach of warranty is of no legal significance unless that breach is what is called a proximate cause of damage. Under the law, a breach of warranty is a proximate cause of damage if, viewing the occurrence in retrospect, the consequences appear to flow in unbroken sequence from the breach of warranty. One shown to have breached a warranty is liable for all the injurious consequences that flow from the breach until diverted by the intervention of some other efficient cause that makes the damage its own, or until the force set in motion by the breach has so far spent itself to be too small for the law's notice. Once the breach is established, it is immaterial that the precise damage or injury, which in fact occurred, was not foreseeable at the time of the breach.

The plaintiff's next claim against the defendant which you must determine is based upon an implied warranty of fitness for a particular purpose. The law provides that where the seller at the time of contracting has reason to know the particular purpose for which the goods are required, and that the buyer is relying on the seller's skill or judg-

ment to select or furnish suitable goods, there is an implied warranty that the goods shall be fit for such purpose. The term "goods," in this instance, of course, refers to the feed and feeding program in question.

The term, "fitness for a particular purpose" means the use of the feed and feeding program for the purpose for which they were intended; namely, the production of eggs from laying hens at as high a rate as can be reasonably expected given the production capabilities of the birds.

An essential element to the existence of a warranty of fitness for a particular purpose is that the plaintiff justifiably relied upon the superior information, skill and judgment of the defendant and not upon his own knowledge or judgment, or the knowledge or judgment he had obtained from sources other than the seller.

It is your task, as jurors, to decide from the evidence whether, under the circumstances, there was an implied warranty that the feed and feeding program was reasonably fit for the particular use for which it was intended, and whether the plaintiff actually relied on this warranty. You must also decide whether that warranty was breached; that is, whether or not the feed and feed program in question, in fact, were reasonably fit for the particular purpose for which they were intended.

If you find that there was no implied warranty

of fitness for a particular purpose, or that the warranty, if any, was not breached, then you must find for the defendant on this point. If you find, however, that a warranty existed and that it was breached by the defendant, you must then consider whether that breach was a proximate cause of the damages claimed by the plaintiff. The meaning of proximate cause as I defined it earlier is applicable here.

If, after applying the law as I have given it to you to the facts in evidence, you find the defendant liable to the plaintiff on the basis of the implied warranty of merchantability, or the implied warranty of fitness for a particular purpose, or both, you may then go on to the question of damages.

What amount, if anything, a party is entitled to recover is solely a question for you to decide. The basic principle of damages is that a damaged party who is entitled to recover at all, is entitled to recover full, just and adequate compensation for its damages.

The measure of damages in this case is computed by determining the difference, if any, between the egg production that plaintiff actually experienced during the relevant time period from the flocks involved, and the production it would have had except for the breach of warranty of the defendant.

The egg production charts and other evidence

bearing on egg production introduced by plaintiff in this case are for your consideration in determining the amount, if any, of reduced egg production experienced by plaintiff.

The plaintiff's evidence is to the effect that, in order to supply its customers, it purchased eggs to replace those it was reasonable to expect its own hens would produce and which they did not do. Thus, plaintiff was put to the expense of purchasing eggs in order to supply its customers, which expense it would not have incurred if its chickens had produced the quantity of eggs which it was reasonable to expect they would produce.

The plaintiff then is entitled to recover as damages the actual dollar figure which you find from the evidence that plaintiff was required to expend for the purchase of replacement eggs to make up the difference between the egg production plaintiff actually received from its flocks and that which it would have received if the defendant's breach of warranty had not occurred. In other words, you must determine the number of eggs that plaintiff did not receive as a result of the failure of the flocks to produce as expected, and then you must ascertain what dollar amount plaintiff expended to purchase those replacement eggs from the defendant and other sources in order to supply its customers.

In this case the parties have stipulated that the plaintiff is indebted to the defendant for $136,750.84 for

f[illegible] and chickens that were provided to it. As I have explained earlier, you need not concern yourself with this claim as the Court will apply it to any damages which you find the plaintiff is entitled to recover. Differently stated, it is only necessary for you to determine the amount of damages, if any, the plaintiff is entitled to recover from the defendant in this lawsuit, and the Court will then make all the other necessary computations including interest.

This is the only opportunity afforded to the plaintiff to recover damages against this defendant, and for that reason compensation for all damages suffered by plaintiff must be included in your verdict at this time.

I again want to suggest to you that the findings of fact in this case are entirely for you. The law is for the Court, and whatever reference the Court has made to the evidence or the claims of the parties is only for the purpose of applying the principles of law to the issues in this case and without any purpose of indicating in the least degree how the Court may think that the case ought to be decided on the facts. That is for you to determine.

The exhibits which have been admitted into evidence during the trial are for your consideration in your deliberations.

Your verdict must be unanimous and will be in writing and signed by your foreman. In this case, you will be

given a special verdict sheet consisting of one page and containing three questions. I am sure that you will find the verdict sheet self-explanatory, and, accordingly, I will not read it to you at this time. Should you have any questions, which I am sure you will not have, you can ask the Court to explain them to you. Once you have completed the special verdict sheet, your foreman will sign it and return it to the court.

A. No. I noted Doctor Ragland's information that was in the letter, and I made no other steps on this other than what, making a note of what he said.

Q Just in the ordinary operation of your office, you came to know about it?

A. That is right.

Q Now, Doctor Hoffman, in his testimony, mentioned treatment for fatty liver syndrome?

A. Yes.

Q Do you recall what they were?

A. Well, he mentioned the use of lower energy rations, higher protein rations; he mentioned the selenium that came into his discussions.

Q Fatty liver pack?

A. Fatty liver pack was mentioned, yes.

Q And, a dilution of feed?

A. A lowering of the energy; he mentioned oat hulls.

Q Now, are you in agreement with his diagnosis of those treatments?

A. Well, because we don't know what causes fatty liver syndrome, we try things, and they may or may not be helpful, and so I think we deal in probabilities, and I would have to frame my answer in that light; that it has been reported by Doctor Couch and some of my own field experiment people have reported back to me that the fatty liver

* * *

MR. DAVIS. Yes, but I haven't anything in the information that counsel furnished us as to the purpose for the requests, which he now says is a written one.

MR. DIVOLL. I think we furnished it with the answers to our interrogatories.

THE COURT. If it is not part of the reports, it is not part of "B".

MR. DAVIS. Your Honor, I wonder if we might possibly discuss this with the Court at the bench, or in open court. I think this is a question to the relevancy of all of this.

THE COURT. Counsel come to the bench.

(At the bench.)

MR. DAVIS. For the record, your Honor, in order to get at the problem, I would respectfully object to this line of inquiry of this witness on the basis that it is irrelevant to any issue in the case. We made no claim here, that I am aware of, that the feed was other than the protein content represented to be in it, and if you are offering it to show that fact, we concede that.

MR. DIVOLL. In your complaint, and we have tried to straighten this out several times---

MR. DAVIS. We do not concede it has the correct amino acid balance and your test reports have nothing to do with amino acid balances. We don't concede

Court Press Form No. 2-Affidavit.
H.15

UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

VERMONT FOOD INDUSTRIES, INC.,

Plaintiff-Appellee,

against

RALSTON PURINA COMPANY,

Defendant-Appellant.

State of New York,
County of New York,
City of New York—ss.:

IRVING LIGHTMAN being duly sworn, deposes and says that he is over the age of 18 years. That on the 9th day of December, 1974, he served one copies of the Joint Appendix on the attorneys for the Plaintiff-Appellee Richard E. Davis Associates, Inc. by depositing the same, properly enclosed in a securely sealed post-paid wrapper, in a Branch Post Office regularly maintained by the Government of the United States at 90 Church Street, Borough of Manhattan, City of New York, directed to said attorneys at No. P. O. Box 666, Barre, Vermont ( ) ~~NxYx~~, that being the address designated by them for that purpose upon the preceding papers in this action.

Irving Lightman

Sworn to before me this
9th day of December, 1974.

Courtney J. Brown

COURTNEY J. BROWN
Notary Public, State of New York
No. 31-5472920
Qualified in New York County
Commission Expires March 30, 1976